

# University News

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V.K. PATIL

## **Future Directions and Strategies in Agricultural Education**

B.M. NAIK

## **Higher Education — Lessons from Japan**

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**Editor :  
SUTINDER SINGH**

# Future Directions and Strategies in Agricultural Education

**V.K. Patil\***

The agricultural education in India has played a very vital role in preparing human resources of teachers, researchers and extension workers who have contributed significantly in bringing "green revolution" in the country. Due to changing agricultural scenario and rapid development of science and technology, it has become very essential to study and analyse in depth the present agricultural education system, facilities, manpower planning, management and funding strategies, linkages with user industries and future projections. The development of regulatory and accreditation mechanism, enhancement of technical skill and competence and adequate financial support is needed to implement the change, support strategic planning and achieve educational goals which would indicate a well-charted path to follow to fulfil society's needs in the 21st century.

## I. Regulation and Accreditation of Agricultural Education

The proposed establishment of Agricultural Education Council (AEC) with statutory powers is a milestone and welcome step for uniformity, regulation, strengthening and monitoring of agricultural education in India. A reorganization of National Academy of Agricultural Research Management (NAARM) or establishment of Central Institute of Agricultural Education and Research should be considered.

*Action:* - Establishment of Agricultural Education Council (AEC)  
- Reorganisation of NAARM.

## II. Faculty Development — A Plan for the Future

*Strategy 1:* Assess the strengths and weaknesses of individual faculty on a continuing basis.

*Action:* - Develop evaluation methods/instruments to be used by faculty members, students, administrators and professional educators to provide diagnostic and instructive information central to personal development of the faculty members.  
- Establishment of mentor groups for each faculty member will provide a vehicle to guide the career development of individual.

*Strategy 2:* Aid Faculty in obtaining a better understanding of themselves and those with whom they come in contact.

*Action:* - Development and sharing of their specific personality profile with those members of the faculty who desire it will provide insights which the individual can draw upon to understand their actions and reactions to events taking place in their professional and personal environment.

*Strategy 3:* Provisions of customised, life long learning programmes to faculty which will enhance and improve their effectiveness in all

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their academic activities including teaching, research, service, counselling, administration and academic leadership.

- Action:**
- Identification of local, regional and national training programmes must be combined with a mechanism to effectively utilise them.
  - Specific funding for faculty development must be identified and applied.
  - Provide short and long-term awards and reinforcement through promotion and salary increments to faculty members.

**Strategy 4:** Promote psychological and physical well-being by identification of stressors in the work place and institution of steps to reduce them.

- Action:**
- Promote healthy mental attitudes towards their professional obligations.
  - Identification of inequities in the work place followed by adjustments.
  - Identification and elimination of all forms of discrimination.
  - Provision of interpersonal skill training opportunities.
  - Promotion of physical well-being like health facilities, life insurance, etc.

**Strategy 5:** Enhance managerial development (administrative skills).

- Action:**
- Establish training programmes for all persons who currently have administrative responsibilities or who may wish to develop them.
  - Utilization of available national experts in development of a national programme for executive development.
  - Provision of a clear mission statement shared by members of administration, faculty, staff and students.
  - Training of faculty staff at regional/national level for improving administrative skills like NAARM; Indian Institutes of Management at Ahmedabad, Bangalore, etc.

**Strategy 6:** Provide resources for development of faculty skills.

- Action:**
- Grants specifically earmarked for development of teaching methodologies on a collective group will prove to be a critical initial step towards attainment of this aspect of faculty development.
  - Orientation to problem-based learning methodology.

- Graduate student training should include instruction on all aspects of responsibilities of an academicians.
- Orientation courses for teachers for changed curriculum.

**Strategy 7:** Establish a national resource for faculty development as a supplement to activities at State Agricultural Universities (SAUs).

**Action :-** Establishment of AEC would serve as umbrella organisation and a national coordinating agency.

- AEC should identify and catalogue an inventory of materials and programmes on teaching methods available at the national level for local implementation as well as overseeing the generalised sharing of resources designed for use by all at the national level.
- Identify personnel suited to monitor the national faculty development effort.
- AEC should develop sponsorship for national workshops/seminars on faculty development.
- Establishment of centres of Advanced Study/Excellence for providing short/long-term training in respective discipline.

**Indicators of Success:**

- Job satisfaction
- Faculty longevity/loyalty
- Improved tenure success
- National/international success
- Student competency
- Placement of graduates
- Professional reputation
- Extra mural grant awards.

### III. Institutional Needs

Before coming to the conclusion of not supporting the establishment of a new institution, there should be a strategic analysis of the manpower requirement and problems faced by agricultural sciences, keeping in view the national perspectives.

- Action:**
- The data-base for manpower requirement should be created by surveys and information technology, e.g. ICAR criteria of one Veterinarian for 5000 large animals. How many Veterinarians are required for livestock?
  - Create opportunities for self-employment.
  - indicate projections for the future in agricultural education.

#### IV. Manpower Planning

Studies and assessment of manpower requirements in agricultural fields should be documented. The changing agricultural scenario and rapid development in the frontier areas of science and information system should be taken into consideration while planning for manpower requirement, viz:

- Agro-based industries
- Byproducts technology
- Food Science (Processing)
- Export potential
- Marketing systems
- Linkages with user industries
- Globalisation, privatisation and free market economy.

#### V. Inter-State Mobility of Teachers and Students

- Exchange of teachers from one university to another on deputation, etc.
- Provision of sabbatical leave.
- Selection of teachers on merit by advertisement of posts for wider spectra.
- The 15% seats at undergraduate level and 25% at postgraduate level in SAUs should be filled in on all-India basis by conducting written and viva-voce examination.

#### VI. Agricultural Education Technology

The lack of modern teaching methods and programmes in agricultural education has deprived it of systematic studies and innovations.

*Action:* - Develop alternative methods, computer technology and programmes in agricultural sciences.

#### VII. Curricula

It is very important to exchange experiences and plans on curriculum change with particular reference to changes in student learning and faculty teaching. The identification of important lessons learnt from recent experiences with case-based and problem-based learning strategies.

- a)
- It has been felt that in a dictated curriculum and constant testing limited problem-solving assignments while faculty often had unrealistic approximations of the time it actually takes to solve the assigned problem or cases.
  - Curriculum changes utilising alternative teaching methods should be used by faculty

members who had been educated in the strategies of implementing such methods.

- Provide orientation to problem-based learning methodology.
- Effect curriculum changes to problem-based needs for competency in certain critical areas.
- Establish objectives for the courses and time involved in solving a problem.
- Frequent feedback between students and faculty should be established.
- Streamline curriculum, integrate courses.
- Decrease lecture time and increase independent study time.
- Emphasize relevant information
- Use indexed syllabi and/or increase text book use.
- Reduce memorisation and trivial regurgitation by substituting problem-based learning.

#### b) Evaluation/Testing

There is a need for devising methods of evaluation that assess not only knowledge, but also reasoning skills, analyses and problem-solving and data-base management.

- Decrease repetitive multiple-choice trivia exams.
- Increase use of open-book exams, take home exam, group-solving efforts, oral exams and presentation.
- Evaluate oral and written communication skills.

#### Examination format:

- Multiple choice
- written and
- oral examinations
- presentation of seminars for improving communication skills for postgraduation.

#### Grading

- A 10-point scale should be uniformly introduced to grade a student.
- Use of computer assisted instructional modules in the problem-based mode will help receive the anticipated need for more faculty teaching time.
- Evaluation of course/teachers by students.
- Professional behaviour in all daily interactions, ethical and professional conduct into instruction and community services are proven assets.

### c) Informatics

- Develop, teach and require appropriate database use.
- Compulsory course credit for computer use.

### d) Career opportunities

- Have more career fairs
- Provide faculty advisers
- Offer courses in career options

### e) Increased competency in areas of interest

- Present core materials efficiently in order that students may devote more time to specific areas of interest.
- Incorporate students in various technical functions like workshops, symposia, seminar, etc.

## VIII. Library and Information Services

Library is the soul of university education. The facilities provided by library services are utilised by all departments and users get a vision and strength to update their knowledge. After devaluation of Indian rupee, the prices of textbooks and journals have astronomically gone up and unbearable financial burden is being felt every year. Modernisation of libraries is also of utmost importance for effective use of library.

**Action:**

- Allocation of adequate financial resources from States, ICAR, World Bank, private or other agencies.
- Equipping libraries with computerised information, storage and retrieval systems and microfilming.
- Training and reorientation of library staff in their respective sub-disciplines.

## IX. Management Systems

It is necessary to convince faculty, students and administrators that using an information management system for problem-solving is superior to the present tradition-bound system.

### a) Selling of Idea

- Develop, implement and use information management systems to solve problems and stimulate the faculty to support the concept and be willing to accomplish it.

### b) Educating the Faculty

- Incorporate the information management system into basic science curriculum and final year classes, i.e. Department of Statistics, Library Science, Instrumentation Cell. Incorporate

these information courses in course-credits of their academic programmes.

- Develop methodology of information management systems and problem-solving.
- Conduct seminars and invite experts to demonstrate instructional methodology using the system.
- Rotationship of Deans and Heads of Department should be discontinued as it has not proved fruitful in Indian environment. Instead, Deans of the faculties and Heads of the Departments should be tenure positions.

### c) Rewarding Users and Developers

- Reward tenure, promotion or merit raises (incentives) to staff.
- Encourage faculty and students to use computers, audio-visual aids, library text-books for their learning experiences.

### d) Developing Database

- Establish an information database and access system that is widely available and simple to use.
- Instruments/equipments technology, etc should be developed to determine user needs and information not available from existing sources.

### e) Sharing Programmes

- Share and provide remote access to areas of excellence in information management to universities or other areas with recognised programmes and specific expertise.
- Share programmes among universities, institutes, farmers, industries, associations.
- Catalogue existing computer-assisted instruction technologies.
- Standardise nomenclature format and organisation of computer and video-assisted learning programmes.

## C. Instructional Facilities

- Assistance should be provided to universities/institutes for improvement of classroom and laboratory facilities, farm equipments, veterinary clinics, etc.
- Equipment of Central Instrumentation Cell with sophisticated and expensive instruments to cater to the needs of many departments like Analysers, Electron Microscope, Computers, etc. The different agencies should finance these facilities liberally.

## XI. Textbooks

- Printing and publishing of textbooks, manu-

(Contd. on page 14)

# HIGHER EDUCATION

## Lessons from Japan

B.M. Naik\*

Japan has made spectacular progress during the last forty years and the credit for this is attributed greatly to its educated and trained work force at all levels. A study entitled *Japan's Intellectual Challenge* by Lawrence P. Grayson of the U.S. National Institute of Education describes Japan's strong commitment to education, particularly technical education. It details the expansion of scientific and technical education at all levels both to provide the engineers and technicians needed by the industry for growth and technical development and to produce the technically literate population required to facilitate the transfer and adoption of technology on which the nation's infrastructure has depended.

To illustrate the growth, in the last 30 years from 1955 to 1982, the number of bachelors degrees in engineering awarded in Japan rose from 9,600 to 73,600 per annum. The US annual figure being surpassed in 1967. By 1982 on a per capita basis, Japan was graduating 2.3 times as many engineers as the US. Based on the figures supplied by US department of Labour, this report demonstrated a close coordination between the average annual rates of increase in engineering degrees and subsequent manufacturing productivity growth for both Japan and US over the years between 1950 and 1982.

Another noteworthy feature of Japan's education is that 21.6% of university students are in engineering. This proportion is the highest in the world. In USA engineering students constitute only 5.9%, UK 16.7%, and Europe 15%. Almost half of graduates in Japan take up studies to postgraduation and of whom again half take up doctoral studies.

The number of students studying science on the other hand in Japan are far too few, only 3.2%, while in US they constitute 11.6%, UK 22.8%, and Europe 13%.

The number of researchers per million of popula-

tion in Japan is 360, largest in the world. USA has 310 and European countries 110 per million inhabitants.

### Teaching & Research Interface

Another feature of Japan is that on the periphery of universities there are several specialised research institutes to absorb the persons coming out of universities with new qualifications. Students get access to research in these Labs and researchers get access to teaching young students, which makes teaching, learning and research supportive to each other. Teaching and research in isolation i.e. when segregated from each other are found to be too weak and irrelevant. Besides, the application of new knowledge, new technology to manufacturing systems and various other professions and vocations is too slow. Teaching, research and extension are found to be more powerful and purposeful if coupled with each other. This is achieved in Japan by locating research laboratories on the periphery of universities. It is this strategy of producing large number of technically qualified people and buffering teaching and research under one roof and absorbing educated people in research activity of Japan which has been threatening European, US, and UK economies.

In India, although the population is almost nine times larger than Japan, yet the engineers graduating per year are less. The postgraduates and doctorate students in engineering are insignificantly small. The research is almost completely absent and consequently we are importing technologies at much higher cost. Saving one rupee on research leads to spending ten rupees on import. It is the collaborators from abroad which have contributed greatly for the advancement of industry in India and not the higher education institutes. The cost paid no doubt is much higher. Is this not like being penny wise pound foolish.

For priority courses like computer science, electronics engineering in which employment opportunities are abundant there is almost funding from Government and students have to learn the new required knowledge at their own cost in self financing institutions. The youth as a result are being educated with

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scarce resources in inappropriate subjects and hence they remain unemployable. We are educating them in colleges, universities for old outdated skills which are not wanted. This is mainly because teachers teach what they know rather than what the students ought to learn. The situation is that what is wanted is not taught and what is taught is not wanted. There is a great mismatch because we have segregated research from teaching. Most of the research grants are going to CSIR Laboratories and they are not accessible to young students and teachers. Shall we not correct the situation by learning a lesson from Japan, and design systems to integrate teaching, research and industry?

### **The Emerging Technologies**

Japan has recently drawn up a project *Shiguma* to meet skill shortages in information technology. The forecast is that by the year 2000 Japan will need more than 2 million software engineers. With an expected supply of the order of one million engineers, roughly 5,50,000 programmers and 4,20,000 system engineers, several measures are proposed to fill this gap. The project *shiguma* is started specially to upgrade the quality of software in Japan and to harvest the worldwide opportunities in Information Technology.

Are we prepared to catch such hi-tech world market opportunities? Are we turning out enough number of system engineers? The question needs to be addressed and answered by all higher education institutes. This is a priority area with skill shortages and high pay off in world economy. We have youth with potential ability but for want of proper infrastructure and direction they tend to remain unemployed and opportunities missed. Universities and colleges ought to become more aware about opportunities arising out of emerging technologies which are short lived and attack them vigorously like a pack of wolves. Private institutes like APTECH, NIIT have shown a vision in starting a variety of courses, but the formal system of education like colleges and universities has lagged behind. Shall we in institutes of higher education become alert and responsive to opportunities and skill shortages in global market?

Japan with its vision, hard work and technical training to its people has been successful in pulling to it the center of gravity of economic activity from Western world. This has become possible mainly because of the fact that education development and industrial growth in Japan have been linked reciprocally. The increased quality and quantity of educated people have provided the manpower necessary for industrial

development. In turn, economic growth has enabled the country to afford and create the necessity for the great expansion in the number of trained people.

Japan has installed research parks, technology parks, incubation centers on the periphery of each university. We have not done anything worthwhile in this respect. USA, UK, European countries have from 1980 installed a large number of such organizations and built bridges between industry and institutions. In this respect, we are far too behind the world. When shall we wake up? Otherwise brain drain will continue and we shall remain using primitive technologies and perpetuating poverty.

In India, the government, universities, institutes, enterprises and individuals, all need to become more aware about technological changes ahead of them and implications of not coping, which are quite serious; so serious that the situation will worsen and we will continue to remain poor most even in 21st Century. The present system, it is feared, will not be in a position to deliver the goods and appropriate imaginative measures are called for urgently. This invites urgent attention of all people who are concerned with future of nation.

### **Conclusion**

To sum up, we have to learn a number of lessons from Japan. *Firstly*, how to educate more people in engineering and divert resources to govt. from science, arts and commerce to technical education. This will increase the productivity of available funds. *Secondly*, we have to learn to integrate teaching with research and industry by installing research parks and technology parks on the periphery of universities and engineering colleges. *Thirdly*, we have to learn to budget more public funds for education and research. *Fourthly*, the new emerging technologies of future need to be taught to youth instead of the old outdated technologies, which are being perpetuated for years.

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## **TO OUR READERS**

**Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.**

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# University and Industry Interface

Sneha Joshi\*

N. Pradhan\*

Sujata Singh\*

India after independence has developed a vast higher education system which is one of the largest in the world. There are at present 187 Universities, 7958 Colleges and a total enrolment of 48.5 lakhs students and 2.78 lakhs of teachers according to the UGC Report for the year 1992-93. Due to this vast system of higher education, India is counted as a big producer of scientific and technical manpower. The industrial growth of our country mainly depends on this scientific and technical manpower. It is on this industrial growth that the development of a nation mainly depends. The modernity, dynamism, strength and self-reliance of the nation and its people are decided by the industrial development. The higher education system has witnessed tremendous progress in all aspects during the last four decades. Modernisation, globalization, autonomy and decentralisation are some of the hallmarks bringing improvements in the system. Financial crunch is a continuous problem that is bothering the education system. Many innovations that are worth implementing in education are not implemented due to financial difficulties. Moreover the growth of education has been marked by uneven infrastructural facilities and the availability of such facilities decide to a great extent the quality of education. With the passage of time the requirement of the quality of human resource in the industries has also changed. The educated youth are unemployed. This is mainly because the universities are operating as ivory towers. The courses offered by the universities are not updated regularly. In this context the Gnanam Committee (1990) and the National Policy on Education (NPE) 1992 observe that the courses offered by the universities are traditional in nature and only a few are related to job market and the environment. Therefore it is evident that a large number of university graduates are unemployed or underemployed. This phenomena has hampered the national development. It is also observed that new recruits, fresh from the universities and having obtained first class, even distinction in their graduation, postgraduation do not have the

knowledge required in the jobs. They have just bookish knowledge. Thus industries arrange in-job training for such candidates. As the graduates are ultimately going to be absorbed in different industries in and around the universities, it is needed that a healthy cooperation and interaction is developed between the faculty members of the universities and personnel of the industries. The avenues of cooperation are not just limited to utilize each others infrastructure and human resources but the scope is very wide i.e., mainly with academic matters and consultancy.

It is observed that many of the universities are not ready to across their traditional boundaries and have interaction with industries due to administrative constraints. NPE (1992) in this context has stated that "University and College shall utilize their autonomy for teaching and research". The emphasis on autonomy of colleges and departments reflects provision of means to interact across boundaries of institutions and funding agencies, better infrastructure, more rational funding for research and integration of teaching, research and evaluation. The need of the day therefore is that "University shall open up itself."

Education as a social institution cannot remain neutral. Anything that happens in society has its repercussions in the educational institutions and vice versa. But today the society with its intellectual resources has not shown a cooperative attitude towards higher educational institutions. The expectation of the society from universities has been too much but the investment and cooperation of the society does not match its expectations. So now at this stage the society shall realize that in difference towards the university signifies neglect towards its own development. The Government of India since 1960 has been urged that 6% of the Gross Domestic Product (GDP) be spent on education, though unfortunately till today it comes to a little over 3% of GDP. As a result most of the educational institutions specially those of higher education are facing financial difficulties. The universities depend mainly on governmental allocation of funds i.e. almost 90-98% of funds are received from the government. Therefore after NPE, 1986 the University Grants Commission (UGC) has asked the universities to generate funds from industries and other such

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organisations. Further, for the development of universities, the UGC has stated that the allocated funds of the university will not be slashed even if the universities generate their own funds. Therefore the universities have enough scope to exhaust their potential to develop themselves.

The Gnanam Committee (1990) stated that a combination of factors such as difficulty faced by graduates in the job-market, unsuitability of traditional courses for industrial purposes, insensitivity or ignorance of academics of the specific problems faced by industries, rapid development of new technologies and the scope for universities to seek new resources and also the need to provide practical training and exposure to students and teachers, signify the urgent need to establish close collaboration between university and industry.

Fostering a close working relationship may bring in various cross section of practitioners into the academic fold for mutual benefit and make university education more meaningful in equipping graduates with marketing skills. Such a type of relationship is not developed easily. It is because the culture and values of university and industry are different from each other. Therefore change in approach for interface is required from the school stage.

### **School Education and Industry Interface**

The NPE (1986) states that, "in the Indian way of thinking, a human being is a positive asset and a precious national resource which needs to be cherished, nurtured, and developed with tenderness and care, coupled with dynamism. Each individual's growth presents a different range of problems and requirements, at every stage from the womb to the tomb. A catalytic action of education in the complex and dynamic growth process needs to be planned meticulously and executed with great sensitivity." It has also stated that education is a unique investment in the present and the future. Therefore the interface of education and industry (Govt., private and public) should be right from the primary stage, through secondary, higher secondary to the higher education. In fact to make the individual self-reliant in an agrobased rural society of India the Gandhian concept of basic education was more appropriate. The primary concern of basic education was to develop in the students work ethics, dignity of labour and earn while learn (an integrated approach). Taking cue from this approach the interface and the mode of interface that can be thought of between school education and industry around the

school has been presented in the Model -1. Such interface can be the vocational training of students in the industries, functional literacy and literacy of industrial workers, social awareness of the people in the industries, inculcation of human values and quality of life. The mode of such interface will be internship programme in the industries, short term in-job training in the schools, earn and learn or part-time job for higher secondary students, exchange of personnel, collaboration in social awareness programmes, and funding of some courses or programmes of the schools by the industries.

### **Utilization of University Output**

Universities are a service oriented institution and a social industry. The different kinds of its products (graduated students) are shown in the circle of Model -2. They are graduates of social sciences, Technical and other diploma courses, Humanities, Professional courses viz. Law, Medicine, Teaching etc., Science and Technology. The other product is knowledge generated through research. These products are ultimately utilized by the human society and the immediate consumers are the industries. Industries here have been taken in a broader perspective. They include Transportation, Communication, Agriculture, Hospital, Defence Service, Banking, and Engineering industries, etc. These have been shown in the square representing the supra system in which all these systems co-exist. For the co-existence of these it is necessary that some healthy linkages are established among all these industries (system) not only to understand each other but for healthy growth of each other and for national development ultimately.

### **University-Industry System**

University and industry are two systems created by the society for its own purpose. Through the assigned objectives of teaching, research and extension, universities serve the society and have in operation formal, non-formal, and continuing education system. By this the University prepares trained manpower in various fields as required by the society. It also develops modern technology and innovates with new ideas for faster and quality products as required by the society. The trained manpower and technology and innovations are in fact the inputs of the industries. With the help of the utilization of natural resources, capital and human resources the industries produce consumable goods and also enrich quality of life. So a country can be developed and modernized only with the products of universities and industries. The cultural transfor-

mation, social change, and economic development of a country can be possible only with the active cooperation and interaction of University system and industries. Model-3 describes as to how the industries depend on the universities for their continuous growth.

### **The Industry-University Interface**

With the liberalization and globalization of Indian Economy, the industry in our country is going to face more competition at domestic and international markets. It therefore requires quality products (of international standards) for the sustenance and development of Indian industries. Quality products not only depend on raw materials and machines, but also on the skilled human resources having a scientific bent of mind and temper. It is the responsibility of higher education to cater to this need of the industry today. The output of a university are graduates, researched knowledge, new technology, change in value system and attitude of the people, and the transmission of socio-cultural tradition. For these output, the universities depend upon their curricula, infrastructure facilities, equipments, funds, and qualified and efficient faculty members. With the utilization of these facilities the universities carry out their teaching, research and extension work and obtain the outputs. On the other hand the purpose of the industries whether government, private or public, is quality products, economic development, services to the society, and human resources development. For achieving these purposes the industries require skilled human resources, technical knowledge, R & D infrastructure facilities and equipments. For their outputs, industry and university require funds. The industries generate their own funds by selling their products and services but the universities are of a different genre. They are service oriented institutions and their products are not saleable like the products of industries. Hence, they heavily depend upon the government grants. About other inputs, both universities and industries have different sets of requirements for maintaining and developing the quality and range of their products. It is in terms of these requirements that the interfaces between universities and industries needs to be carried out. The following are some avenues where university and industry can have interface. The details of the interfaces have been given in Model - 4.

1. *Exchange of Personnel:* The personnel of industry can come to university departments and share the teaching with faculty members, and faculty members can go to the related industries of their disciplines and can not only actively participate in the production or ser-

vice of the industries but shall have first-hand experience. This will enable them to make their teaching upto date and relevant.

2. *Joint Consultancy:* As knowledge based industries will be on the increase, personnel of the industries should have constant dialogue with the faculty members and researchers of the universities. For their teaching and research also the faculty members should be in constant touch with the needs of the industries. Such a dialogue be initiated by the top level managers of the industries and heads of the university departments. For consultancy, Swaminadhan (1995) has suggested the establishment of a separate consultancy cell in the university and remarked rightly that consultancy should not be done at the cost of teaching and research activity of the university. But this should also be equally true for the industries that priorities be given to their own work. However for effective interface this idea be implemented in some universities on trial basis.

3. *Sharing of Resources:* There are many costly equipments, books and other materials in our universities which are underutilised and due to financial difficulties many such resources are not obtained by the universities. Such is the case with the industries also. Industries have many specialised libraries and valuable periodicals and journals are not optimally used. So if these valuable resources are properly utilized on sharing basis, both industries and universities will be benefited and with recent development of networking all the industries and universities in a city, state or even the country as a whole can be the members and take advantage of each others' resources. Moreover the information flow can be faster and the interface will be easier.

4. *Training of Students:* Many employers in the industrial set up have observed that the fresh university graduates with first class and even distinction lack required technical knowhow of the industries and are therefore provided in-job training and induction programmes are organised. To avoid such a situation the students during the academic year shall be attached to the industries related to their disciplines. So a direct linkage is required. The industries therefore shall adopt some departments or courses of the university and these courses be directly related to their own requirements. For the training of students the faculty and industry personnel shall have proper planning and the duration and timing be planned out. Moreover due weightage to such training be given for promotion and certification of students.

**5. Curriculum Development:** Curriculum upgradation and framing new curricula are regular and necessary activities of a university. The criteria for this is that curricula should be need based and useful to the immediate society. Therefore it is essential that the industry personnel shall form a part of the committee for framing curriculum. The industry shall be integrated with those departments of the university where there is direct interface e.g. textile mills and Dept of Textile Technology, Dept. of Medicine and Hospitals and chemical industries, Dept. of Banking and Banks, etc. The committee shall only take care of the present needs of the industries but will also have a futuristic perspective in developing curriculum.

**6. Staff Development:** Staff development is an important function of the manager irrespective of organisations. It is not mere growth or learning by the staff but the group interactions which enable the staff to develop together. Universities and industries today shall organise such forums and provide such avenues to its staff to learn from each other in their concerned areas. For this the university/industry shall organise seminars, conferences or workshops by inviting people from the concerned industries and departments for sharing knowledge and experiences.

**7. R & D Collaboration:** The collaboration will help the universities to overcome the resources crunch and generate knowledge by optimizing the use of resources in the R & D laboratories, adapt new and imported technology to meet the global competitiveness, enrich teaching and research in the universities with the back up of field experience. So the process of collaboration will bring excellence in industries and universities.

**8. Sponsorship of Research:** Many national level and state level organisations are sponsoring research today in the universities, but these are insufficient. So the industries being the immediate consumers shall sponsor research programmes of the universities and in turn universities should become accountable in this regard. The industries may ask the universities to conduct those researches which were useful to them for new and quality products. Sponsorship may be sought by the universities with regard to research staff, equipments and field works, but industries shall not dictate terms to the universities.

**9. Quality Control and New Technology:** Liberalization and globalization of market has forced the Indian industries to go for quality control of their products. Adapting and developing new technology therefore is very much essential. In this venture the faculties of

university can help the industries through R & D collaboration and their own knowledge and research pursuits. The graduates will also be of high quality with the knowledge of their job through training during their study in the universities.

**10. Funding :** In the recent seminar at the Department of Educational Administration, M.S. University of Baroda, it was thought appropriate for the Universities to develop a Corpus Fund. It will help the universities in self-reliance. This fund be created by collecting contributions from industries, alumni, charitable trusts, etc. This idea was also discussed at a meeting of personnel from Govt. of Gujarat., industries and universities of Gujarat.

### **Expected Output of the Interface**

The interface in the above stated avenues will enable both the industries and universities to obtain the following: (1) Maximise the utilisation of resources; man & materials, (2) Develop the quality of their staff, (3) Develop and maintain the quality of their products, (4) Wider knowledge dissemination, (5) Updated and relevant curricula, (6) Reduce the employment rates, (7) Raise students' self-sufficiency and (8) Develop R & D activities which will ultimately lead to national development.

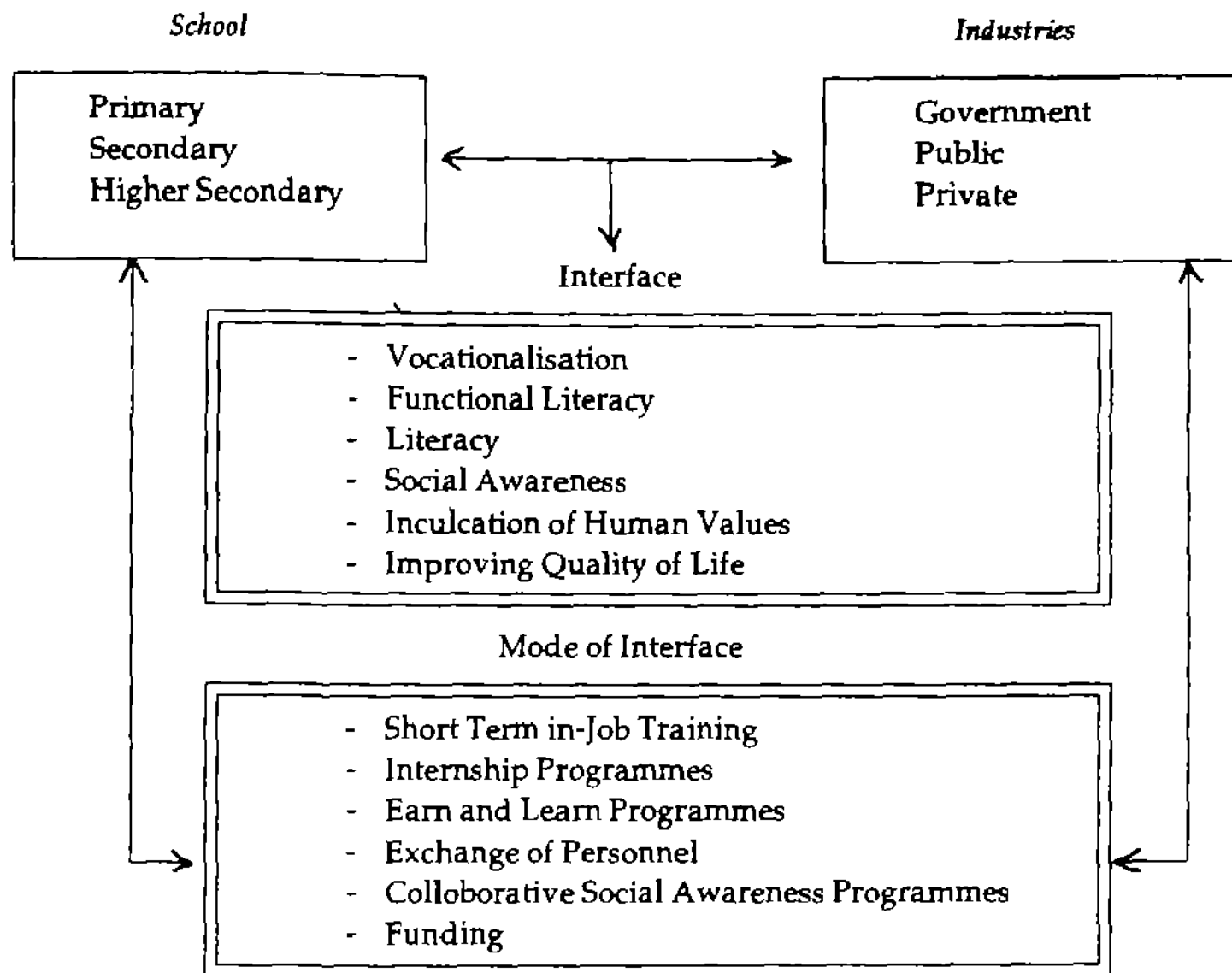
### **Conclusion**

The Indian higher education has expanded enormously. It has not come out of the problems of financial crunch. It has also the problem of making the courses, modify traditional courses, equip ill-equipped laboratories and reduce unemployable graduates. The industries also have the problems of competing in the global market, quality control, staff development and developing and adapting new and foreign technologies. With the many avenues of interface the problems of both may be solved to a great extent and that will lead to national development.

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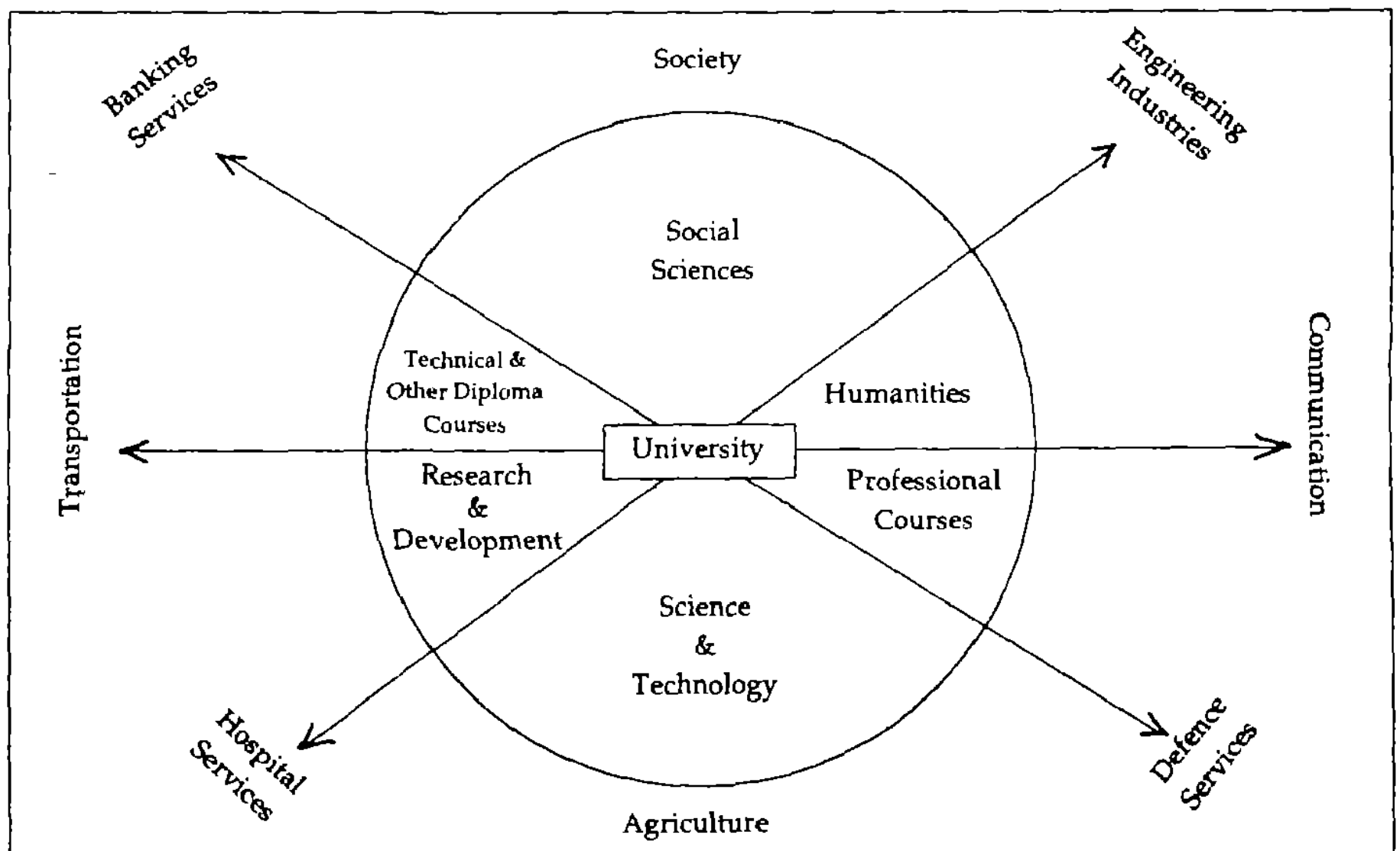
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2. Dept. of Education, Ministry of HRD. *Programme of Action, 1992*. Govt. of India, New Delhi.
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### Model 1 : School Education & Industry-Interface

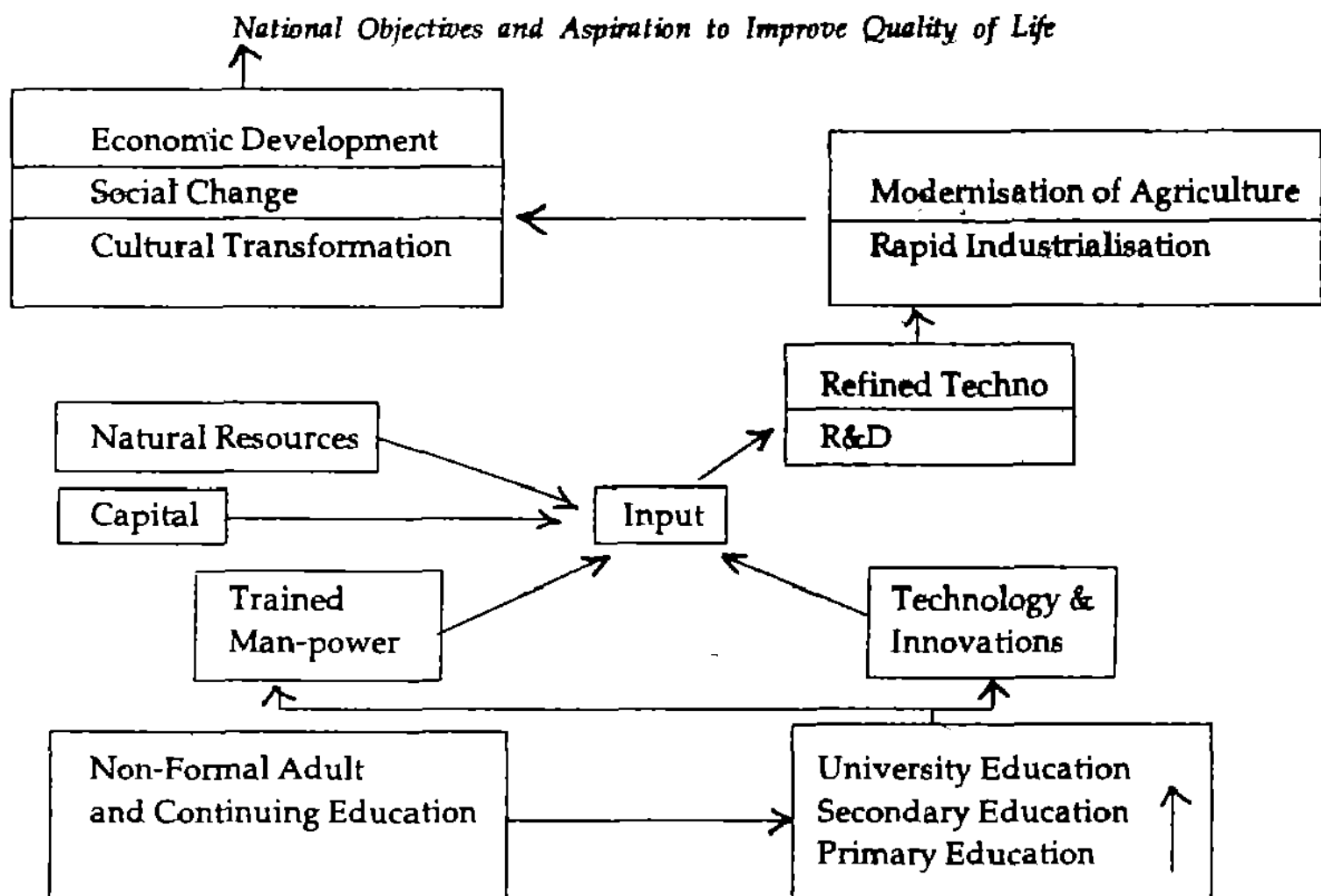


### Model 2 : University Products and their Utilisation in Industries

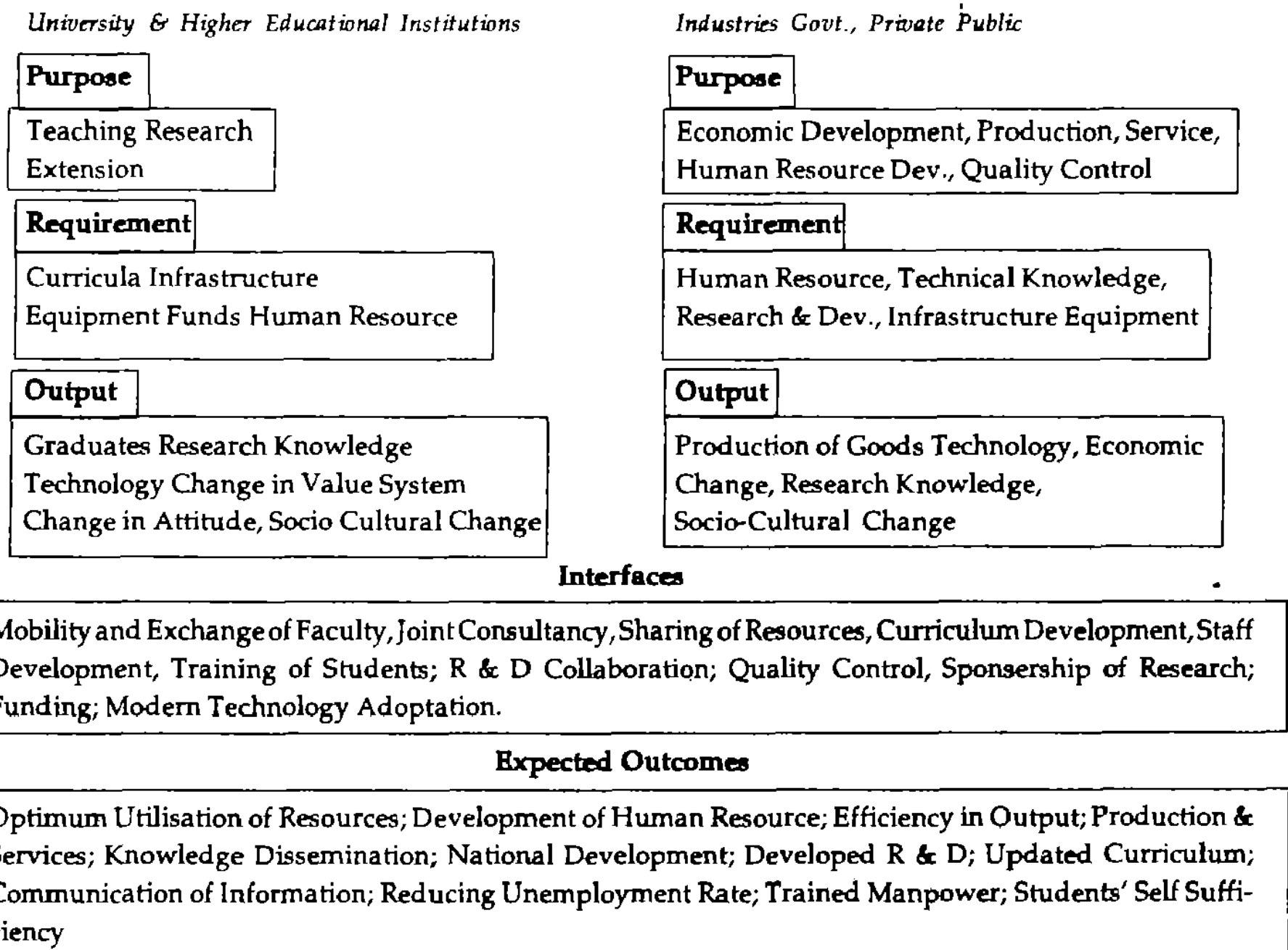
*Output of University Education*



### Model 3 : University-Industry System



### Model 4 : University-Industry Interface



# Distance Education in Kashmir

Manzoor A. Shah\*

## Introduction

Distance Education is a mode of teaching which has emerged as a viable strategy for fulfilling the statutory and social obligation of providing education at the doorsteps of the needy and the less privileged section of our society. This system of education has also come to the rescue of those who wanted to continue their education but could not do so for reasons purely social, economic and geographic and would now like to have access to higher education. It should be noted at the very outset that in spite of phenomenal rise in the number of educational institutions, both in government and private sectors, only a small percentage of youth of our country has access to higher education. The distance mode of education, therefore, is the only significant alternative to take the fruits of knowledge to the doorsteps of everyone. As such, the system has come to stay as a viable alternative to meet the ever growing demands for access to the higher education in the country. It may be mentioned here that one of the main objectives of distance education system is to take education to the hills & dales, the remotest village, the desert and the lakes where the formal system of education is almost non-existent and thus extend educational opportunities to common men and women of such distant, places, backward regions and hilly areas.

Distance education, is essentially a mode of education whose main focus is on 'helping distant learners learn how to learn'. If the system is to function effectively, each of its components, viz Instructors, Radio broadcasts, TV telecasts and UGC's country-wide classroom programmes, study centres, formative and summative evaluation, contact programmes, textbooks response sheets, production of efficient study materials, etc should be properly articulated to make a coherent and logical whole.

## Distance Education and Kashmir Valley

Distance education programme in the elysian valley of Kashmir does not have a long history but does not also still linger in a state of infancy. It was initiated by the University of Kashmir in February 1976 as a modest innovation to enlarge access to education statewide. An important objective was to overcome the difficulties of distant learners and to help those

who could not pursue their education through the formal system of learning. In the form of correspondence courses it all started as a parallel opportunity for earning degrees in conventional courses available in different departments of Kashmir University, with printed lessons sent through mail to students who got themselves enrolled in the Directorate of Correspondence Courses, which was later in 1986 renamed as the Department of Distance Education.

Right from its inception to date, the Department of Distance Education, University of Kashmir has been catering to the numerous and varied needs of distance learners of the state, in general and that of the valley, in particular. It has been doing a pioneering work by imparting education through correspondence and distance learning in B.A./B.Com., M.A. (Eco. Urdu) M.Com, B.Ed, LLB (Acad.), Certs: Lib. & Inf. Sc., Hindi, Kashmiri and Urdu. The Department has turned out many graduates and postgraduates in these disciplines over the years. The various courses, reportedly in the pipeline are M.A. programmes in Political Science, Mathematics, Sociology and P.G. Diploma programmes in Marketing Management and Human Resource Development.

However, looking at the present education scene and activities of the Department, it is disquieting to note that major thrust of distance education is not in line with the main objective of the system, aiming at covering the entire population and even the remotest corner of the State. If we ruminate over the course of development and analyse the university's performance, it is found that much has been done during the past eighteen years and much more remains to be done. Many distant areas have been covered under the system of correspondence education and many more are yet to be covered. It is noteworthy that some far-flung areas like Uri and Kupwara in the Kashmir Valley, Leh and Kargil in the Ladakh region and Doda and Buderwah in the Jammu Division have not received proper attention and have remained neglected for a pretty long time. The university would have recieved a very positive response from the student community and learners of these far off places, aspiring to go for higher education, had it launched a wide publicity drive well in time. It was only in 1993 that the appointment of one liaison officer, on part-time basis, was made in Leh but other areas still remain neglected zones. It may be stated here that the establishment of the Department of Distance Educa-

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tion by Kashmir University was expected to help in developing systematic and properly organised media support for distance education programmes all over the state of Jammu & Kashmir but the Department has not come up to the expectations of the distant student community.

In order to overcome the deficiencies of private appearance and home study of the distant learners/students of Leh and Kargil districts in the Ladakh region, Baramulla and Kupwara districts in the Kashmir Division, Doda and other far off places in the Jammu Division, it is time to consider introducing correspondence education in all these districts by launching an adequate publicity drive. It may be indicated here that the people living in these areas for years have been living in poverty and their problems get multiplied by the vagaries of nature. In such a scenario, the importance of an effective system of distance learning is self-evident. As such, it becomes imperative that wide publicity campaign about the courses offered by the Department concerned is followed up by opening a Study Centre/Student's Support Services Cell/Academic Counselling Corner in each of such districts which should contain a full-fledged library, audio-tapes, TV and video cassettes. This centre/cell/corner should be headed by experienced teachers drawn from the faculty of non-formal education who should be designated as 'Academic Counsellors' and stationed permanently, for atleast four months at each of the above districts. The main

functions of the proposed centre/cell/corner would be

1. to acquaint the students with correspondence education and enrol them for various courses offered by the department;
2. to identify student needs and problems;
3. to provide students a complete and well balanced educational experience from pre-enrolment counselling to postgraduation;
4. to assess and evaluate assignment responses;
5. to provide information on technical and vocational programmes; and
6. to monitor and evaluate Academic Counselling.

--- The above functions of the centre/cell/corner are bound to open an era of unlimited learning opportunities to all students of the above mentioned districts. It is time we pay special attention to plan and build up an effective infrastructure of student support services, so essential to the distance education teaching-learning process. The establishment of these centres can certainly go a long way in reinforcing and strengthening the distance education system in Kashmir valley. Though in the beginning it may be an arduous and complicated task, it is expected that the extension of Distance Learning Scheme of the Department of Distance Education, Kashmir University to such distant regions can pull the state together and fulfil a long cherished desire of a disadvantaged section of our society.

## Future Directions and Strategies in Agricultural Education

(Contd. from page 4)

als, journals, bulletins, should be subsidised by different agencies of books, promotion/publishing.

- Adequate financial incentives to author(s).

### XII. ICAR Support System

The setting of norms, accreditation and regulation of agricultural education programmes and for better coordination and monitoring of educational schemes should be done by constituting different committees comprising ICAR and SAU staff. AEC should be reoriented and modernised with necessary facilities taking the national perspective in view.

#### Funding

Additional funding is required every year to support an expanding undergraduate and postgraduate educational programmes. Assistance should be given in the following areas:

- More support for scholarships/stipends.
- Research Fellowships by ICAR.

- Support from corporate organisations/companies should be encouraged as donations to research, rural reconstruction programmes, and they are Income Tax free and get 100 per cent rebate.
- Part-time teaching/research assistantships.
- Creation of infrastructure and facilities for laboratories/farm.

We have to prepare for change, response to change, planning for change and reacting for change — these are the words and phrases that seem to be ringing in everyone's ears. We should accept the responsibility for change. Please do not consider teaching and learning in isolation from other responsibilities.

The national efforts are wonderful supplements, but they are *not* in my judgement, substitutes for efforts at each of our universities. The future progress will be measured by how many suggestions/recommendations are translated into action.

# University-Industry Interaction

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**Hon'ble Shri Mulayam Singh Yadav, the then Chief Minister, Govt. of Uttar Pradesh, delivered the Convocation Address at the thirteenth convocation of the Kanpur University, Kanpur. He said, "The industries can utilise the expertise of the university professors and scholars to shape their Research and Development establishments on modern lines in a number of different areas. With this end in view, a separate Research and Development cell may be established in the universities to coordinate interaction with local and national industries on various research and development projects and training programmes." Excerpts**

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The past few years have witnessed a general deterioration in the field of education and in the academic environment of the universities and colleges. The government and the society have been facing the menace of unfair means being adopted by the students during the examinations and the demoralisation being spread among them. The teaching standards, examination and evaluation systems have also shown a downward trend. The students teachers, guardians, government and the society at large are all responsible for this vituperation. The government while sincerely wishing to rectify the situation, is not in favour of creating an atmosphere of fear and terror among the students by considering the use of unfair means in the examination as a cognizable and non-bailable offence that may give rise to terrorism among the students. Instead, there is a vital need to generate an educational environment that develops character, self confidence and a sense of duty and responsibility among the students and teachers so that they themselves discard this evil practice and strive towards *ne plus ultra*. We had appointed a high level committee to suggest ways and means to reform our education, examination,

evaluation and administrative systems. The report is now available with us and I would like that our universities and colleges sincerely follow the suggestions incorporated in the report to improve their academic and examination standards.

The government has also made efforts despite its limited financial resources, to see that the academic plans and programmes of the universities and colleges engaged in imparting higher education to the students, do not suffer and the universities have been sanctioned special grants. We are also pledged to ensure that the financial grants by the UGC or by such other bodies for the first five years, receive funding from the state government for their further continuation. In this connection, I would expect that the universities should tap other financial resources too that are available within the country and abroad for the growth and promotion of higher educational standards and for raising academic levels, and the state government promises to subscribe an equal amount. I hope that this liberal policy of the state government will encourage universities and colleges to generate their own maximum funds to become self supporting.

It would be appropriate here to mention that the government has taken a new policy under consideration to offer 'Block Grant' to universities. I am confident that this will help them a great deal in managing their resources in a better way. Our state is not so prosperous from the economic point of view as compared to other states due to slow pace of industrial development. We are trying our best to give an impetus to industrial development and we look forward to the significant role to be played by state universities in this matter.

In the present economic scenario of liberalisation and globalisation, we expect the universities to establish close contact with the realities of economic and industrial world and understand their problems and needs and assess the number of personnel that is required by various industries both in technical and non technical fields. The universities, must, therein, be able to modify their syllabi accordingly and start such professional courses, for both the sexes, short term as well as long term, which are of direct use to the industry. The UGC and other governmental bodies offer grants to universities to run such courses and the state government will also support such programme on priority basis. I am confident, these efforts will provide maximum job opportunities to educational youth.

I expect cooperation and collaboration between universities and industrial organizations in other spheres also. The industries can utilise the expertise of the university professors and scholars to shape their Research and Development establishments on modern lines in a number of different areas. With this end in view, a separate Research and Development cell

may be established in the universities to coordinate interaction with local and national industries on various research and development projects and training programmes. The university can also offer consultancy services of their professors to the industry and the government will give a matching grant to the university equal to the income so earned. I appeal to the industrial houses and commercial institutions for their maximum co-operation and generous financial support to the universities on projects of mutual interest and benefit.

An important aspect to be considered by the educational institutions of higher learning is the uniformity among the syllabi of their courses. I appeal to the university professors, their Boards of Studies and Academic Councils to come together and evolve a uniform syllabi in order to develop uniform standards of education in the state. The U.P. Government has constituted a Co-ordination Committee to achieve this purpose. In the same connection I would like the universities to rethink on the issue of retaining the three years bachelor's degree programme, being presently run in the universities in place of the earlier two year programme, on the recommendations of the UGC from the view point of improving the quality of education and its standards. Some colleges have expressed their reservations on the three year degree course model.

Universities must ensure that higher education and knowledge in science and technology and in other fields is not restricted to a few classes and categories of the society. The country and society should not be deprived of the geniuses and talent of thousands of

young boys and girls who have been denied the opportunities of higher education because of the historical discriminations and their abject poverty. We are committed and determined to take the lamp of education to every village and every home. In this context I expect from our universities and colleges to ensure that no deserving young person, aspiring for higher education, is deprived of the same, owing to poverty. Our education should not be so costly that it becomes inaccessible to poor and weaker sections of the state. Also, the academic programmes and activities of the universities and colleges should be planned in accordance with and related to the needs and problems of the region of their location. The knowledge acquired by the students in the higher academic institutions should be constructively utilised for the development and upliftment of society.

The universities, in general, and the Kanpur University, in particular, with the help of government and non-government institutions, voluntary organizations and industries should also contribute significantly in tackling environment and pollution problems. An awareness among the educated youth living in big cities is also to be generated so that they do not fall victim to vices like drug addiction, intoxication and deadly diseases like AIDS. The universities and the

affiliated colleges can play an important role in improving the quality of life of the people living in the surrounding areas by working on programmes related to health and sanitation, nutrition, family welfare, population control, adult education, upliftment of poor and weaker sections, legal consciousness, village industries, and developing technical skills among men and women in villages.

The problem of the fast depletion of the conventional sources of energy is well-known. It has become imperative that the colleges and universities should concentrate their full efforts to harness new and unconventional energy sources and take up exhaustive research and development work on projects related to alternate energy sources and applications and energy conservation.

Finally, the state government is committed to give the utmost priority to education and higher education among women. The University Grants Commission has decided to give hundred percent priority to women's education programmes.

I should like the universities to make good use of the opportunity and contribute meaningfully in all directions in this endeavour of national reconstruction and social change.

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## Excerpts from the Report

by

**S.S. Katiyar, Vice-Chancellor,  
Kanpur University, Kanpur**

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Kanpur University has at present spread its wings in eleven districts having about 90 affiliated

colleges teaching courses under 11 different faculties. There are more than 4000 teachers working in the

affiliated colleges which have an enrolment of over a lakh of regular students. Almost an equal number of students are also taking examination as private candidates in the faculties of Arts and Commerce both at the undergraduate and postgraduate levels. Apart from the affiliated colleges, the university has some constituent colleges as well such as : (1) Ganesh Shanker Vidyarthi Memorial College, (2) Harcourt Butler Technological Institute, (3) Govt. Central Textile Institute, and (4) Nehru Institute of Ophthalmology. Besides these, there are 12 Ayurvedic and Unani Colleges also affiliated to the university.

The residential wing of the university includes the facilities of Commerce, Life Sciences, M.B.A. and Computer Centre. There is also a faculty of Advanced Studies in social sciences which includes English, Education and Adult and Continuing Education departments. In addition to teaching and imparting training, research guidance is also undertaken by these departments. More than 25 students have completed their work for Ph.D. and D. Litt. degrees in different areas so far.

It was Radhakrishnan who said 'Literacy is not education, knowledge is not education, but the growth of wisdom, the capacity to look upon other subjects with compassion that is what is necessary'. True to these words the university campus does not restrict itself to the narrow confines of teaching but is moulded in multifarious activities such as generating mass awareness among the people regarding environment, population education, equality of sexes, AIDS, prohibition, uplift of the under privileged sections, imparting of legal knowledge, communal harmony, national integration with the help of the university departments

of Adult and Continuing Education.

With a view to improving the academic standards of the colleges, the College Development Council (CDC) has also been established on the campus with the help of the University Grants Commission. The CDC is awarding Junior Resident Fellowships as well as scholarships both National and International to teachers of the affiliated colleges. It is monitoring the UGC developmental grants and helping teachers in their minor as well as major research projects. It thus provides a two-way flow between the UGC and the colleges.

Kanpur University has also been doing great deal to encourage games and sports both on the campus and in the affiliated colleges. There is a full fledged department of Games and a number of our students have won several prizes and have lifted trophies in the inter varsity meets.

The University has also undertaken some important construction projects. The buildings of (i) the Institute of Business Management, (ii) Women's Hostel, and (iii) Sri Ratan Pal Singh Art Gallery have been successfully completed.

### **Research Work, National Seminars and Symposia**

We believe that the function of a University should never be to regulate but to stimulate thinking, so that knowledge continues to grow. Keeping this in view, special efforts, with a great deal of planning are being made to promote research work of a high academic standard in the university on the one hand and on the other we are planning to enter into collaboration with such a prestigious institute as the Indian Institute of Technology, Kanpur for socially useful projects. Though we have M.Phil classes in a few subjects, we wish to provide

the facility of M.Phil degree in a large number of other subjects too.

Apart from research activities, a number of National Seminars/ Workshops/Symposia have also been organised on the campus as well as in the affiliated colleges so as to provide an opportunity to our teachers as well as students for academic interaction and exchange of ideas with distinguished scholars from other universities.

### **Regularisation of the Academic Session**

It is, indeed, a matter of deep concern to all of us that most of the universities of the state, including Kanpur University, have been facing the unprecedented crisis of irregular and disturbed sessions for more than a decade. This has adversely affected academic activities and the students have suffered the most as a result. The regularisation of the session, therefore, has received my utmost attention. Keeping this aim in view, we began our exercises in early October '94 and a schedule for the entire academic session was framed with the minutest details prescribing dead lines for admissions, submission of examination forms, sending of Admit Cards and other relevant work relating to the holding of examinations. It is a matter of some satisfaction that we are strictly following the schedule. It is heartening to find that our determined efforts and meticulous planning have reaped rich dividends.

We have also planned timely declaration of the university results so that we are in a position to start our next academic session from the first week of August 1995.

### **Sanctity of the Examinations**

We have made adequate arrangements to maintain the sanctity of the examinations and to restore the credibility of our degrees. It is worth mentioning here that

Kanpur University is probably the first university in the state which has followed the recommendations of the Awasthi Committee report regarding the conduct of the examination, and will implement them effectively.

### **Private Candidates**

Any discussion of Kanpur University examinations is incomplete without mentioning the examination of the private candidates. The massive increase in the number of students seeking admissions in the universities and affiliated colleges as a result of the expansion of higher education has not been accompanied by the opening of new colleges, with the result that a large number of young boys and girls are denied admission.

The university is planning to establish a unit of 'Non-formal and Distance Education' or a correspondence course. Under this scheme all the students who are desirous of appearing as private candidates will be provided with adequate standard reading material to be supplemented by lectures on selected areas and group discussions with competence in different subjects. In short a unit on the pattern of open university on our campus is very much on our agenda.

### **Vocational Courses**

The UGC has been advising a restructuring of courses in such a manner that students are able to learn the skills and acquire the knowledge relevant to the job market.

We have selected 12 colleges and have recommended a number of vocational courses to be started from July 1995. Some of the courses that have been recommended include Tourism and Travel Management, Advertising, Sales Promotion and Sales Management, Biological Techniques and Specimen Preparation, Instrumentation, Functional

Hindi, Food Science and Quality Control, Computer Application.

### **Office Automation**

In this age of advanced technology, a system of efficient administration cannot be envisaged without bringing about radical changes in the administrative apparatus of the university. With this aim in view the university is planning in-house automation in its administrative wing.

For an adequate management of Information Systems and for quick disposal of files, as also to co-ordinate the activities and information of the different departments efficiently and timely, a number of computers are being installed in different departments and sections of the university.

### **Central Library**

The University Library has about 50,000 books, 2000 magazines and journals and about 5,000 research dissertations. On an average nearly 2000 books are purchased every year. A time-bound programme for the modernisation of the library has been framed and we are planning the computerisation of the entire library.

### **New Courses**

The following courses are proposed to be started in the university at the postgraduate level under the faculty of Advanced Studies on the Campus :

(1) Computer Science, (2) Biotechnology and Genetics, (3) Renewable Energy and Rural Technology, (4) Material Science, (5) Technical Physics and (6) Industrial and Applied Chemistry.

It is proposed to have the degrees of M.Sc. and M.Tech in some of the above courses while the rest will be Diploma Courses. It is also proposed to run short-term professional training courses in the area of solar energy, biomass energy,

biomass energy, energy conservations, rural and appropriate technologies and energy management.

### **Energy Park**

To popularise non-conventional and alternative sources of energy it is proposed to establish an energy park on the campus. The Park will be equipped with demonstration units of various conventional and non-conventional energy sources in functional state.

### **Rural Development Cell**

We are also planning to establish a Rural Development Cell on the Campus with a view to coordinating rural development activities. The cell will generate awareness among the rural people of our area and will also impart training in small-scale rural industries.

### **Department of Bio-Technology**

One of the major programmes of the university is to establish a department of Biotechnology. Under this programme it is proposed to have two-year M.Tech and M.Sc. courses and a Ph.D. programme. Special emphasis will be laid on the courses such as plant protection Biology, Protein engineering, Genetic engineering, Molecular basis and Pathogenesis of Infectious diseases, Molecular Immunology, Protein stability, etc.

### **University-Industry Linkage**

The new liberalisation and privatisation of economy initiated by the Central Government have necessitated the building of a link between the university and the industry. The above cell will not be confined to local or near-by industries but will approach industries in other states of the country as well. The cell will also provide consultancy services to the Industries through its experts. To meet the needs of the industry, training programmes for their workers, managers, etc are also envisaged under the scheme.

### Population Education in Higher Education

The Population Education Resource Centre (PERC), Department of Adult, Continuing Education & Extension, Delhi University, recently conducted a one-day workshop on Population Education in Higher Education to review the performance of Population Education in universities and colleges.

Inaugurating the workshop Dr. S.S. Rana, Dean of Colleges, University of Delhi, talked about human resource development through the universities and colleges. Universities under the third dimension, he said, were taking up the issues of gender-discrimination, Literacy, Health and other components of quality of life. No doubt, to him Literacy and Population Explosion were the two important problems facing the country, welfare of the people could not be successfully done unless the twin problems of illiteracy and population explosion were tackled.

Professor Amar Kumar Singh, Ex-Vice-Chancellor, Ranchi University and the Chairperson, Council for Social Development, in his keynote address, referred to Health Issues, Tribal-Development, Population Policy of India and Research through the universities and colleges, Literacy and health status. Literacy and quality of life of tribal population differed in rural and urban areas. Education and Literacy were very important aspects for the development of country, he said.

Professor Singh emphasized on common research design for all the PERCs. He repeatedly focused on

developing research base in the universities and colleges. "We have three R's of Literacy, we must have three R's of population also", he said. Health and Population issues mostly overlap. Providing core curriculum, he talked of Population and Health Education — higher the Literacy greater the Population-Health status, Higher the age at marriage, higher Population Health status.

Professor Singh said that population and quality of life should consist of following aspects: (a) Population — Health, Employment, Literacy, Education, Environment; (b) Family Planning; (c) Scientific understanding of Body knowledge; (d) Diet Nutrition—Balanced Diet; (e) Cleanliness of Food and Water, also methods of presentation of Nutrition; and (f) Drug-Abuse.

Talking about the strategies for Population Education, he said that the first task was to develop core components, followed by intervention materials (students and communities both the groups) and educational materials. The mode could also include lecture, discussion picture, songs, small-group discussion, etc.

Dr. R.C. Gupta, Research Officer, UGC said the Commission through its Population Education clubs organised several activities i.e. debate, quiz declamation-contest, etc. Dr. O.P. Malik, National Consultant, UGC, shared his experiences of Lucknow and Gurukul Kangri Universities. He also discussed the recommendations of

Cairo conference on Population and Development.

In the second session, the Directors/the representatives of the service area universities presented the reports of their respective universities. The representative of Indira Gandhi National Open University said that they were starting certificate course in Population Education under the faculty of Social Sciences. Lucknow University Director talked about various college and community based activities to strengthen Population Education further. Gurukul Kangri University organised health camp, essay competition on Population and Health. Rohilkhand University requested the PERC to further strengthen their college based activities with the support of PERC. Dr. Bhati, Head of Jamia-Milia Islamia said that and they conducted debate, essay writing competition. Under M.A. in Extension Education Programme, Population Education was one of the optional papers, he said.

Shri Ravi Sharma, DACEE, University of Delhi, stressed the need to develop information package for the students. He stressed the need to strengthen the activities in the service area universities. Shri B.P. Mohanty, Incharge Population Education, said that the performance of the activities of Delhi University clubs needed to be further strengthened.

Gorakhpur University had initially 68 clubs but currently 37 Population Education Clubs had been in operation. They initiated several activities at college and community level.

Professor Ajay Devgan, Na-

(Contd. on page 22)

# ASSOCIATION SPORTS C

S.No.	Game	Organising University	Last date of closing the entries	Last date of closing the detailed entries	Date of commencement of the tournament
<b>A. GAMES ON ALL INDIA BASIS</b>					
1.	Athletics (M&W), Half Marathon & Walking (M&W)	Panjab	Nov. 18	Dec. 23	Jan. 2
2.	Ball Badminton (M)	Andhra	Nov. 23	-	Jan. 7
3.	Ball Badminton (W)	Calicut	Dec. 13	-	Jan. 27
4.	Boxing	M L Sukhadia	Dec. 1	-	Jan. 15
5.	Chess	Gurukula Kangri	Oct. 22	-	Dec. 6
6.	Cricket (W)	Alagappa	Dec. 24	-	Feb. 7
7.	Cross Country Races (M&W)	Gujarat	Sept. 5	-	Oct. 20
8.	Cycling (M&W)	Punjabi	Nov. 26	-	Jan. 10
9.	Football (W)	Calcutta	Oct. 14	-	Nov. 28
10.	Gymnastics & Malkhambh	Shivaji	Oct. 22	Nov. 26	Dec. 6
11.	Hockey (W)	Panjab	Sept. 25	-	Nov. 9
12.	Judo (M&W)	Barkatullah	Nov. 12	Dec. 17	Dec. 27
13.	Korfball	HAU, Hisar	Dec. 22	-	Feb. 5
14.	Powerlifting (M)	Kakatiya	Nov. 14	Dec. 19	Dec. 29
15.	Rowing (M&W)	Anna	Jan. 2	Feb. 6	Feb. 16
16.	Softball	Kakatiya	Dec. 15	Jan. 9	Jan. 19
17.	Squash Rackets	Delhi	Dec. 19	-	Feb. 2
18.	Swimming, Diving & Water Polo	Delhi	Aug. 29	Oct. 3	Oct. 13
19.	Tennis (W)	Jiwaji	Dec. 5	-	Jan. 19
20.	Wt. Lifting & Best Physique	Kakatiya	Dec. 19	Jan. 23	Feb. 2
21.	Wt. Lifting (W)				
22.	Wrestling	Shivaji	Nov. 21	Dec. 26	Jan. 5
23.	Yogasanas	Kurukshetra	Oct. 9	-	Nov. 24

# UNIVERSITIES

## : 1995-96

### B. GAMES ON TWO-ZONE BASIS

S.No.	Game	Zone	Organising University	Last date of closing the entries	Date of commencement of Inter-Zonal Tournaments
1.	Basketball (W)	NEZ SWZ & IZ	Berhampur Shivaji	Oct. 9	Nov. 24
2.	Handball (M&W)	NEZ SWZ & IZ	Kanpur Calicut	Oct. 3	Nov. 17
3.	Kabaddi (W)	NEZ & IZ SWZ	Dr. Y S Parmar North Gujarat	Sept. 26	Nov. 10
4.	Kho-Kho (M)	NEZ SWZ & IZ	Punjabi Bangalore	Nov. 21	Jan. 5
5.	Kho-Kho (W)	NEZ SWZ & IZ	Punjabi Rani Durgawati	Dec. 13	Jan. 27
6.	Tennis (M)	NEZ & IZ SWZ	Delhi Bombay	Dec. 19	Feb. 2
7.	Volleyball (W)	NEZ & IZ SWZ	Dr. Y S Parmar Sri Padmavathi Mahila	Oct. 10	Nov. 24

### C. GAMES ON FOUR-ZONE BASIS

S.No.	Game	Zone	Organising University	Last date of closing the entries	Date of commencement of Inter-Zonal Tournaments
1.	Badminton (M&W)	NZ EZ SZ WZ&IZ	PAU, Ludhiana North Bengal Madras Rajasthan Agril	Oct. 10	Nov. 24
2.	Basketball (M)	NZ&IZ EZ SZ WZ	G B Pant Banaras Alagappa Devi Ahilya	Oct. 17	Dec. 1
3.	Cricket (M)	NZ EZ SZ WZ & IZ	Punjabi Vinoba Bhave Sri Venkateswara M S Baroda	Dec. 4	Jan. 18
4.	Football (M)	NZ EZ SZ&IZ WZ	H N B Gaghwal Bidhan Chandhra Krishi Sri Krishnadevaraya South Gujarat	Oct. 3	Nov. 17
5.	Hockey (M)	NZ&IZ EZ SZ WZ	GNDU NEHU Gulbarga Jiwaji	Oct. 21	Jan. 5
6.	Kabaddi (M)	NZ EZ SZ&IZ WZ	Meerut Burdwan Mangalore Gujarat Agril.	Nov. 1	Dec. 15
7.	Table Tennis (M&W)	NZ EZ SZ WZ&IZ	Dr. Y S Parmar Bhagalpur Manipal Academy M S Baroda	Oct. 10	Nov. 24
8.	Volleyball (M)	NZ EZ & IZ SZ WZ	Gurukula Kangri Ranchi Kerala Barkatullah	Oct. 6	Nov. 20

(Contd. from page 19)

tional Institute of Health and Family Welfare, highlighted the activities initiated by National Institute of Health & Family Welfare. He highlighted two important aspects of Population Education i.e. (i) Qualitative aspects; (ii) Quantitative aspects and stressed the need to intensify the field based activities for large scale community participation to improve the quality of life of people at large.

Directors of Departments of Adult, Continuing Education from Uttar Pradesh & Haryana, Incharge, Population Education clubs, faculty members of Delhi University and representatives of non-governmental organisations participated in the workshop.

### **IIT-Bombay Convocation**

"Our inability to provide free and compulsory primary education to all children below 14 stands out as a monumental failure in post independence development," said Maharashtra Governor Dr P.C. Alexander. He was speaking at the 33rd convocation of the Indian Institute of Technology, Powai, Bombay recently.

Dr Alexander said India had made progress in education in the post independence period. "The number of universities has increased from 25 in 1947 to 197 in 1995. Today, we have more college teachers than there were students in 1947," he said. "However, many things have not happened in the way we had hoped," he lamented.

He said a good proportion of educational institutions were weak in providing basic facilities like good classrooms, playgrounds, libraries and laboratories. "Students, however have no alternative but to

enrol in such institutes", he said adding that "when foundations are weak, the stability and strength of the whole structure is affected."

He expressed the need for a radical change in attitude and outlook of people towards education. "Education is to teach the child to think and not what to think," he felt.

Dr Alexander mentioned that though India had the third largest reservoir of scientific and technological manpower in the world, only 0.89 per cent of India's GNP was spent on research and development.

However, he was confident of a better future since the prime minister had announced that six per cent of the nation's GNP would be spent on education as against the existing share of 3.4 per cent. The governor also felt that the new economic policy would compel India to change its approach to education, research and development.

This year, degrees were awarded to 298 B Tech, 78 MSc, 311 M Tech, 26 M Design, 10 M Phil, 105 Ph.D and 18 five year M tech students. Professor C.N.R. Rao, former Director of the Indian Institute of Science, Bangalore, received an honorary doctorate of science. The President of India medal, awarded to the student with the highest scores, was shared by Rohit Negi and V.V. Acharya.

### **Collaborative Research at AMU**

The Department of Biochemistry at Aligarh Muslim University (AMU) is reported to have received three research projects worth Rs. 1 crore from the UK and the US for conducting research on "Human diet and anti-cancer compounds, enzyme reactors and kidney function and diseases".

A grant of Rs. 50 lakhs has been sanctioned by the European Economic Community (EEC) to a joint research project pursued by AMU and the University of Leeds, the U.K., to conduct research on "anti-cancer compounds."

The AMU Department of Biochemistry has been engaged in more than one dozen research works. These include a collaborative research project with the Washington State University. The Department has recently completed an academic link programme sponsored by the British Council and the University Grants Commission.

### **E-Mail Facility at Gorakhpur University**

E-Mail Facility made available to the Department of Physics of the Gorakhpur University by the Inter University Centre in Astronomy and Astrophysics (IUCAA), an autonomous institution set up by the University Grants Commission, was recently inaugurated by Sri Mahaveer Prasad, Governor of Haryana. Speaking on the occasion Sri Prasad lauded the efforts of IUCAA in providing a network of E-Mail services across the country. He said that E-Mail was a cheap, quick and convenient mode of communication. "It gives response quicker than even fax. One can send messages in India and abroad wherever this facility is available on moderate cost comparable with SDD charges. The facility helps research and development", added Sri Prasad.

Prof R.M. Mishra, Vice-Chancellor, Gorakhpur University, expressed the hope that the installation of E-Mail facility in the Department of Physics would go a long way in boosting up research in Astronomy and Astrophysics.

## **JNU Academic Staff College**

The Academic Staff College, (ASC) of JNU conducted four Orientation Programmes, two in Social Sciences and two in the Science Stream during 1994-1995 for the lecturers who had acquired a minimum of five years of teaching experience and were ready to embark upon research leading to Ph.D or those who were keen to update their knowledge for better teaching or research.

The objective of Orientation Course was to inculcate among the participants an awareness about the basic principles of Higher Education and understanding of disciplines like Sociology, Psychology, Philosophy, Management and other related spheres of knowledge.

The Academic Staff College also organised 13 Refresher courses during 1994-95, and participants were drawn from all over the country for all the programmes.

### **PG Course in Agrl Microbiology**

Aligarh Muslim University is reported to have decided to introduced a postgraduate degree course in agricultural microbiology from this academic session. The AMU Vice-Chancellor, Mr. Mehmoodur Rehman, said veterinary science and other job oriented courses would also be introduced shortly.

### **MCLAS at Women's College**

The first Multimedia Compatible Library Automation System (MCLAS) in India has started functioning at H.H. the Maharaja's College for Women, Trivandrum. MCLAS can seamlessly integrate

text, numerics, pictures, video, animations and sound within a single digital information environment. It has provision for database creation using CDS/ISIS information retrieval services, library house keeping operations, college campus network and on-line access to international databases.

### **International Varsity of Peace Studies**

The Pondicherry Chapter of the World Union proposes to set up an international university of peace studies in Pondicherry. This was revealed by Prof. T.V. Pillai, Chairman of the Union.

Prof. Pillai said the university

would take steps to promote advanced research in the field of international studies and the new world order as envisaged by contemporary Indian thinkers. The university would also function as a training and research centre in international peace and amity, he said.

### **Environmental Biology Awards**

The Academy of Environmental Biology (AEB), an autonomous organisation concerned with the propogation of Research in Science & Technology with particular reference to Toxinology, invites nominations for Awards for the year 1994, These are (1) Archana Medal,

## **Study in Russia**

An official delegation of the Union Ministry of Human Resource Development, with representatives from the Association of Indian Universities (AIU), All India Council for Technical Education (AICTE), Educational Consultants India Limited (EdCIL), Medical Council of India (MCI) visited the universities and higher educational institutions in Russian Federation. The team members acquainted themselves with the pattern of higher education in the Russian Federation to facilitate establishing the equivalence of their degree/diplomas and to operationalise the agreement between Indian and Russian Governments.

As a result of the report of the delegation, the AIU shall continue to recognise the "Diplom Engineer", "Masters degree", "Candidate of Science" and "Doctor of Science" degrees with the corresponding awards of Indian universities for purposes of admission to higher courses and for employment in cen-

tral services as per Govt. of India notification.

Study in Russia is now secured by agreement between Indian and Russian Governments and all agreements with private agents in Russia and India have been cancelled by State Committee for Higher Education of the Russian Federation/Russian Govt. Educational Consultants India Ltd. have been designated to select students for engineering, medical and other courses. EdCIL have advertised the procedure of admission in 1995-96 in recognised leading institutions in or near Moscow and St Petersburg. Admission will be finalised by EdCIL on merit/test/interview.

Students interested in admission may obtain additional information on Russian higher educational institutions or universities in India and other countries from the SIS Unit of the AIU or on telephone Nos. 3313390/3312429/or Fax 011-3315105.

and (2) 10th JEB Prize (Young Scientist Award).

Members of AEB and Heads of Universities/IITs, Research Institutes, Institutions & Learned Societies can nominate Scholars for these Awards.

## Technology Appreciation Programme

The Central Library of the Indian Institute of Technology, Madras recently organised a Technology Appreciation Programme for Industries in association with Industrial Consultancy and Sponsored Research (IC & SR), IIT Madras. The objective was to discuss recent trends in Information Technology with specific reference to CD-ROM and its usage.

The topics discussed included (i) Information Support Services for Industry; (ii) CD-ROMs : Technical Issues; (iii) Information Storage on CD-ROMs; (iv) Software for CD-ROMs; (v) CD-ROM Databases in Central Library; and (vi) CD-ROM based Data Search & Retrieval Demonstration at Central Library.

49 industries attended the programme.

## Dr Mohan Honoured

Dr M Srinivas Mohan, Professor, Department of Chemistry, Osmania University, has been admitted as the Fellow of Royal Society of Chemistry, London. He was also recognised as a Chartered Chemist.

Dr Mohan was elected to the Fellowship for his outstanding contributions to research, teaching and advancement of Chemical sciences. His research work in the fields of coordination Chemistry and Bio-Inorganic Chemistry has been published in reputed international scientific journals. He is also a member of the American Chemical Society, the New York Academy of Sciences, Indian Chemical Society and Catalysis Society of India.

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## We Congratulate ....

**Dr R.S. Paroda, Director-General of the Indian Council of Agricultural Research (ICAR) who has been awarded the Sir Chhotu Ram national award instituted by Chaudhary Charan Singh Haryana Agricultural University for 1994-95.**

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Dr. Balain said initially under the Rs 250-crore project, Tamil Nadu, Andhra Pradesh and Haryana agricultural universities and all ICAR-run institutes would be given grants. Subsequently other agricultural universities would also be provided funds out of this project.

Speaking of the advances the Indian scientists have made in animal breeding, Dr Balain said that owing to their best characters all of our famous buffalo, cattle and goat breeds had been imported by various countries and these animals had contributed significantly in their adopted countries.

He said keeping the magnitude of task that lied ahead, the animal scientists now would have to come out with appropriate and meaningful discipline oriented and programme based strategic plans. He said our emphasis should now change from crop or livestock production systems to integrated crop livestock based production system.

Dr. Balain urged that all animal science institutes and colleges should attain result oriented and achievement based status over a specified period of time and they should be known by their products and accumulation of knowledge and information.

He also emphasised on the transfer of technology at the grassroot level. He reiterated that to make the researches more meaningful and realistic, these should be done at field level in rural conditions, rather than at farm level.

Dr. Vidya Sagar, Dean, College of Animal Sciences and the Organising Chairman of the Summer Institute, in his welcome address, disclosed that in the summer institute, the participants were im-

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## News from Agricultural Universities

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### World Bank HRD Project in Agriculture

Scientists of agricultural universities and Indian Council of Agricultural Research (ICAR) institutes would get new opportunities to upgrade their academic standards and skill under a World Bank project for agriculture human resource development. Under this projects, agricultural scientists would have ample scope to get advanced training in developed coun-

tries and participate in various international conferences and workshops. This was stated by Dr Daya Singh Balain, Deputy Director General (Animal Sciences), I.C.A.R., at the valedictory function of an ICAR-sponsored summer institute on "Advanced techniques and teaching methodologies in animal breeding" held at CCSHAU in Hisar recently.

parted knowledge, skill and training in various aspects of Computer and Biometrical techniques, advances in research in animal breeding and breeding policies as well as curriculum development, lesson planning, personality development and educational technology.

According to Dr. A.S. Kanaujia, Head, Department of Animal Breeding, 18 guest speakers from various National Institutes and experts from the Academy of Agricultural Research and Educational Management (AAREM) of the university in addition to the faculty of the department delivered about 50 lectures and conducted ten practical training sessions.

### **Extension Education Year**

Dr. M.D. Asthana, Financial Commissioner & Secretary, Agriculture, Haryana said that the gap between the research trial of scientists and the actual yield obtained by the farmers at their fields be abridged. This could only be done if the farmers were educated in scientific management of crop husbandry stages. He was inaugurating the Extension Education Year at Chaudhary Charan Singh Haryana Agricultural University (CCSHAU) in Hisar recently.

Dr. Asthana emphasised that in view of the modern proliferation of mass media, Haryana, on the pattern of Karnataka, could also take lead in making interaction with the farmers through satellite channel. He applauded the Extension system of the university and urged the scientists to maintain cordial rapport with the farmers.

Dr. S. Arya, Vice-Chancellor, CCSHAU, in his presidential address, disclosed that technology for biological control of diseases had

been developed and the same would be popularised among the farmers during the Extension Education Year.

As 76 per cent of India's population was dependent for their livelihood on agriculture and the farmers' upliftment was the main responsibility of Haryana Agricultural University, the programme of Extension Education Year had been launched to disseminate the new technology to the grassroot level of the farming community. The Vice-Chancellor said that today when many of the gulf countries and whole of the South-East Asia looked forward to India to meet their foodgrain requirement and India alone would be requiring twenty crore tonnes of agricultural production to meet its own requirement till the next century, how Haryana could remain as the second surplus food producing state. It was a big challenge to the scientists and the agricultural and horticultural departments of the state, he maintained.

Reiterating his determination of dedicating CCSHAU in the service of farmers, Dr. Arya said his aim was to ensure that farmers themselves exported their farm produce and increased their income by cultivating export-oriented crops. He said that to facilitate the farmers in getting inputs and information from one single place, a Single Window System had been implemented at the university.

On this occasion, Dr. Arya released a booklet of the Extension Education Programmes to be taken up during the ensuing year.

A large number of farmers, farm women besides university scientists and officials of the state department of Agriculture and Horti-

culture attended the inaugural function.

### **PAU to Coach Liberian Students**

The University of Liberia proposes to seek technical assistance from Punjab Agricultural University to train Liberian students and staff in various disciplines of agriculture. This was stated by Dr Patrick L.N. Seyon, President, University of Liberia, when he met Dr A.S. Khehra, Vice-Chancellor and other officials of the university recently in Ludhiana.

Dr Khehra assured him of all possible help. He said the university had already started training scientists from developing countries and at present scientists from China and Nigeria were undergoing training at the institution.

### **British Aid for Veterinary Research**

The British government is reported to have granted aid amounting to 1.43 million pounds for a collaborative research project between Indian Veterinary Research Institute (IVI), Izatnagar and the Institute of Animal Health (IAH) Compton, UK.

The project, which began in April, involves a four-year programme of institution building through transfer of technology in the Indian Veterinary Research Institute.

The project will enable IVRI to develop reliable and more cost-effective methods of diagnosis and of vaccine production, thus allowing improvements in animal disease control and treatment in India.

The diseases covered by the project include salmonellosis,

rinderpest, foot and mouth and sheep and goat pox.

Wider application and development of the technologies and skills transferred through the project will help address a number of human and animal diseases. The project, to be managed by the British Council Division, will be conducted through a programme of training and collaborative research.

### New Crop Varieties

The Andhra Pradesh Agricultural University (APAU) recently released six more new varieties of crops bringing the total number of crop varieties developed and released since its inception to 208. According to Dr. M.V. Rao, Vice-Chancellor of APAU, the rice variety "Bhadrakali" is suitable for the Telangana region for gallmidge bio-type in endemic areas. While the heat-tolerant VR 520 finger millet is suited to the coastal district of the State, the "Narasimharaya Korra" developed at the Nandyal Research Station comes up well under rainfed conditions throughout the State.

LAM 410 greengram, developed at the Guntur centre, is resistant to yellow mosaic virus, black leaf spot and pod shattering also. LAM22 blackgram is popular for rice fallows of the Krishna-Godavari zone due to its high yield potential. The Narasimha variety of cotton, developed at Nandyal station, is tolerant to jassids with high yield potential and is suitable for black soils of Rayalaseema region.

The rice hybrids released by APAU, particularly APHR2, are performing well at different centres of the country. MTU1001, a pre-release rice culture developed at

Maruteru is rapidly spreading due to its high yield potential. Dr. Rao said that there was a proposal to release a high yielding castor variety PCS4 developed at Palem. Re-

search on various aspects such as integrated pest management, soil and water management, livestock were being extensively carried out at the APAU, he added.

## News from UGC

### Countrywide Classroom Programme

Between 1st August to 15th August, 1995, the following schedule of telecast on higher education through INSAT-ID under the auspices of the University Grants Commission will be observed. The Programme is presented in two sets of one hour duration each every day from 6.00 a.m. to 7.00 a.m. and 1.00 p.m. to 2.00 p.m. The programme is available on the TV Network throughout the country.

#### 1st Transmission

6.00 a.m. to 7.00 a.m.

#### 1.8.95

"Solar Heater"  
"Modern Techniques of Map Making - I"  
"Herbal Medicine Pharmaceuticals in India"

#### 3.8.95

"Models"  
"Folk Rhythms - Part I"  
"Women Writing in India"

#### 5.8.95

"Solving Equations in Integers : The Equation  $ax^2 + by^2 + cz^2 = 0$ "  
"The Visual Environment and Behaviour - Part II"  
"Introduction to Tropical Monsoon"

#### 6.8.95

"Vision Beyond Sight"  
"Advanced Transportation"  
"The Week Ahead"

#### 8.8.95

"Bookfare - I"  
"Modern Techniques of Map Making - Part II"  
"Image of a Girl Child"

#### 10.8.95

"Folk Rhythms - Part II"  
"English Romantic Poetry - Part I"  
"Yours Sincerely"

#### 12.8.95

"Geometry Made Simple"  
"Negotiable Instrument - Part I : Promissory Note and Bill of Exchange"  
"Effects of Noise Pollution on Health"

#### 13.8.95

"Efficient Lighting"  
"Coal : New Ways to get and use it"  
"The Week Ahead"

#### 15.8.95

"Special Programme on Completion of 11 years of Countrywide Classroom"  
"Heritage Conservation : Preserving Buildings of the Past"  
"Lifeline Express"

#### 2nd Transmission

1.00 p.m. to 2.00 p.m.

#### 1.8.95

"Copper Extractions"

"10th General Conference of International Association of Universities : Issues in Higher Education - Part I"

"Yours Sincerely"

#### 2.8.95

"Bookfare - 1"

"Alampur through the Ages - Part I"

"New Visual Imagery in Medicine"

#### 3.8.95

"Application of Technology Tools through Multi-Media"

"Magicians of the Earth"

"Shakespeare As We Like Him"

#### 4.8.95

"Starfinder : Discoveries with the Hubble Space Telescope - I : Making Sense of Data"

"Understanding Creativity"

"Wood for the Tree"

#### 5.8.95

"The Dawn After (Curtain Raiser)"

"Ground Water Recharge - Part I"

"Butterfly : The Jewels on Wings - The Life Cycle"

#### 6.8.95

No Telecast

#### 7.8.95

"The Week Ahead"

"Oscillation Coupled Systems"

"Cancer of Pancreas"

#### 8.8.95

"Copper Chemistry"

"10th General Conference of

International Association of Universities : Issues in Higher Education - Part II"

"Current Affairs : Economics and Commerce - Part X

#### 9.8.95

"Electrical Power"

"Alampur through the Ages - Part III"

"Muscle Formation and Cell Division"

#### 10.8.95

"New Horizons - Part XXVI"

"Searching the Frontiers - Part I : Electro Ceramics"

#### 11.8.95

"Starfinders : Discovery with the Hubble Space Telescope - II : Picture from Numbers"

"Drunken Driving"

"Management of Degraded Ecosystem - II"

#### 12.8.95

"The Dawn After - Part I"

"Polo : The Royal Sport - Part I"

"Ground Water Recharge - Part II"

#### 13.8.95

No Telecast

#### 14.8.95

"The Week Ahead"

"Inflation : What is it all about"

"Agroforestry : A New Art in Agriculture"

#### 15.8.95

"Special Programme' on Completion of 11 years of Countrywide Classroom"

"Copper : Occurrence and Mining "

"Issues in Higher Education - Part II"

#### Hindi Telecast

प्रातः 6.00 से 6.30 बजे तक

#### 2.8.95

"सूफी संत मलिक मुहम्मद जायसी - भाग 2 : सूफी साधजा और प्रेमपथ"

"औद्योगिक क्षेत्र में मानवी सम्बंध - भाग 6"

#### 4.8.95

"सूफी संत मलिक मुहम्मद जायसी - भाग 3 : पझावन में अन्योक्ति एवं लोक आस्था"

#### 7.8.95

"राग संगीत - भाग 1 : यमन"

#### 9.8.95

"राग संगीत - भाग 2 : यमन कल्याण"

#### 11.8.95

"दो तीन नियम - भाग 1"

"मस्तिष्क मृत्यु"

#### 14.8.95

"इतिहास के झरोखे से : दीवान मोहणोत नैणसी"

#### **Beware !**

#### **These are Fake Universities**

The University Grants Commission (UGC) has notified a list of 20 fake universities operating in the country. These are: Maithili University/Vishwavidyalaya, Darbhanga, Bihar; Mahila Gram Vidyapith/Vishwavidyalaya, Allahabad, UP; Varanaseya Sanskrit Vishwavidyalaya, Varanasi, UP; Commercial University Ltd., Daryaganj, Delhi; Indian Education Council of UP, Lucknow, UP; Gandhi Hindi Vidyapith, Allahabad, UP; National University of Electro Complex Homoeopathy, Kanpur, UP; Netaji Subash

Chandra Bose Open University, Acaltal, Aligarh, UP; Shrimati Mahadevi Verma Open University, Mughal Sarai, UP; DDB Sanskrit University, Putur, Trichi, Tamil Nadu; Bharatiya Shiksha Parishad (UP), Open Vishwavidyalaya, Lucknow, UP; Arya University, Srinagar, J&K; St. John's University, Kizhanattam, Kerala; National University, Nagpur, Maharashtra; United Nations University, Delhi; Vocational University, Delhi; Uttar Pradesh Vishwavidyalaya, Kosi Kalan (Mathura), UP; Maharana Pratap Shiksha Niketan Vishwavidyalaya, Pratapgarh, UP; Raja Arabic University, Nagpur, Maharashtra; Urdu University, Bhopal, Madhya Pradesh.

The UGC, which is entrusted with the responsibility of regulating standards of higher education in the country, clarified that an institution simply registered under the Societies Act, 1860, could neither claim to be a university nor have any authority to award degrees.

Degrees/diplomas/certificates awarded by such "fake" institutions would not be recognised for purposes of employment and admission to courses of higher education, the Commission reiterated. In case of any doubt about the authenticity of an institution, students have been advised to check with the UGC whether it is duly established by law and is recognised by the Commission.

The 20 self-styled universities listed above have been functioning in contravention of UGC Act and issuing advertisements in newspapers for the award of such "degrees" as BA, B.Com, BEd, MSc, MBBA, LL.B, MLib Sc. etc. The UGC counselled students not to seek admission to such institutions.

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## News from Abroad

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### Fellowships in the Humanities and Social Sciences

The Woodrow Wilson International Center for Scholars has announced Fellowships in the Humanities and Social Sciences for the year 1996-97.

Created by the Congress of the United States as the nation's official memorial to its twenty-eighth president, the Center seeks to commemorate through its residential fellowship program both the scholarly depth and the public concerns of Woodrow Wilson. As President Wilson wrote, "The man who has the time, the discrimination, and the sagacity to collect and comprehend the principal facts, and the man who must act upon them, must draw near to one another and feel that they are engaged in a common enterprise."

The Woodrow Wilson Center awards approximately 35 fellowships annually in an international competition to individuals with outstanding project proposals representing the entire range of scholarship, with a strong emphasis on the humanities and social sciences. The Center especially welcomes projects that transcend narrow specialities.

In order to foster a true community of scholars, the Woodrow Wilson Center prefers its Fellows to be in residence for the entire U.S. academic year (September through May), although a few fellowships are available for shorter periods with a minimum of four months.

Men and women with out-

standing capabilities and experience from a wide variety of backgrounds (including government, the corporate world, and the professions, as well as academia) are eligible for appointment. For academic participants, eligibility is limited to the **postdoctoral** level, and normally it is expected that academic candidates will have demonstrated their scholarly development by publication **beyond the Ph.D. dissertation**. For other applicants, an equivalent degree of professional achievement is expected.

The average yearly support is approximately \$47,500, including travel expenses for Fellows, their spouses, and their dependent children, and health insurance.

Where appropriate, Fellows are associated with one of the Center's seven programs: Asian; East and West European; Historical, Cultural, and Literacy Studies; International Studies; Kennan Institute for Advanced Russian Studies; Latin American; and United States Studies.

**The deadline for receipt of applications is October 1, 1995.** Decisions on appointment will be made by March 1, 1996.

Further information and application forms may be obtained from: The Fellowships Office, The Woodrow Wilson Center, 1000 Jefferson Drive S.W., SI MRC 022, Washington, D.C. 20560.

## Social Science and Medicine Conference

The Biennial series of the Asia Pacific Social Science and Medicine Conferences first began at a global level, a quarter of a century ago. The aim of the conference series is to afford to social and biomedical experts opportunities to create networks to facilitate collaborative research projects across disciplines and between countries.

The first Asia & Pacific regional conference was held in India, the second in Manila and third is now being planned to be held in Perth, Western Australia from 11 to 16 February, 1996.

The conference coordinator, Dr. Lynne Hunt, is seeking input from the Asia-Pacific Region on the overall theme of the conference and topics for the sections within the conference. Suggestions for section themes within the conference include : reproductive health; occupational health; and suicide.

Further details may be obtained from Dr. Lynne Hunt, The Department of Health Studies, Edith Cowan University, Joondalup Drive, Joondalup, Western Australia 6027, Australia.

### To Our Contributors

Contributors are expected to submit only original articles for publication in the *University News*. If an article is found to be plagiarised, it will be the sole responsibility of the contributor to face legal action, if any.



## Indira Gandhi National Open University

Schedule of Telecast for the period 1st August to 31st August, 1995  
6.30 a.m. to 7.00 a.m.

Day/Date	Academic Prog.	Title
2.8.95 Wednesday	Distance Education	Counselling in D.E.
4.8.95 Friday	Management	Personal Computers for Managers
7.8.95 Monday	Bachelors Degree Programme	Linear Transformation and Matrices
9.8.95 Wednesday	Library and Info.Science	Classified Catalogue Code Pt. I
11.8.95 Friday	Management	Globalisation of Indian Business
14.8.95 Monday	Bachelors Degree Programme	Raikhik Rupantaran aur Avyuh
16.8.95 Wednesday	Creative Writing in Eng.	1. Profile of a Creative Writer 2. Open Channel
18.8.95 Friday	Management	Policies and Institutions of Small Scale Industry
21.8.95 Monday	Bachelors Degree Programme	Hindi ki Boliyan
23.8.95 Wednesday	Rural Development	Towards a Greener World — Social Forestry and Wastelands
25.8.95 Friday	Management	New Product Launch
28.8.95 Monday	Bachelors Degree Programme	Social Change in India
30.8.95 Wednesday	Nutrition and Health Edu.	Effective Management of Family Resources

## A Welcome Addition

V.K. Bhansali\*

**M S Naidu and V Kamaraju. High Voltage Engineering. Second Edition. New Delhi, Tata McGraw Hill, 1995. Pp. xii + 372. Rs. 90.00.**

There are not many books by Indian authors in the field of High Voltage Engineering and the present book is a welcome addition.

The material in this book has been organized into five sections, namely, (i) insulating materials and their applications in electrical and electronic engineering, (ii) breakdown phenomena in insulating materials — solids, liquids, and gases, (iii) generation and measurement of high d.c., a.c., and impulse voltages and currents, (iv) over-voltage phenomena in electrical power transmission systems and insulation coordination, and (v) high voltage testing techniques, testing of apparatus and equipment, and planning of high voltage laboratories.

These five sections have been accommodated in eleven chapters. Starting with introduction, the chapters include conduction and breakdown in gases, conduction and breakdown in liquid dielectrics, breakdown in solid dielectrics, applications of insulating materials, generation of high voltages and currents, measurements of high voltages and currents, over-voltage phenomenon and insula-

tion coordination in electric power systems, non-destructive testing of materials and electrical apparatus, high voltage testing of electrical apparatus, and design planning and layout of high voltage laboratories.

There is a dearth of authentic and comprehensive books on the subject of High Voltage Engineering. The transmission of bulk quantity of electric power necessitates the use of extra-high voltage. Hence the importance of this branch of electrical engineering cannot be over-emphasized even for the developing countries like India.

A sufficient number of solved examples along with comprehensive list of references have been given at the end of the various

chapters, thus encouraging the student to read the source material. However the list of references has not been updated.

An interesting and unique feature of this book is the chapter on Design, Planning and Layout of High Voltage Laboratories with technical details of various High Voltage Laboratories in India. It is expected that the information given in this chapter will be extremely useful for the High Voltage Engineers.

It would have been better if an introductory chapter of HVDC Power Transmission was also included in the book. The presentation of the matter in the book is lucid and there is continuity among various chapters.

It is expected that the second edition of the book would go a long way in creating the interest among the students in the otherwise complex and difficult subject. This would also be useful for practising engineers as well.

### ENGINEERING COLLEGE : KOTA

RAWATBHATA ROAD, KOTA- 324 010

(An Autonomous Institution of Government of Rajasthan)

No. F(5) 2/5/95

Date : 14.7.95

#### CORRIGENDUM

#### (FOR THE POST OF PROFESSOR IN MECHANICAL ENGINEERING)

Refer Advt. No F(5)2/4/95 dated 20.5.95 through which the applications for the above post were invited. The candidates possessing specialization in thermal/design are also eligible to apply for the above posts. The application may be sent to the Registrar by 14th Aug 95. Other terms will remain unchanged.

REGISTRAR

NOTE:- Application form and other details may be obtained from the college during office hours by sending IPO of Rs. 25/- for Gen. & Rs. 12.50 for SC/ST payable to Registrar, Engineering College, Kota.

\*Professor, Department of Electrical Engineering, Faculty of Engineering, M.B.M. Engineering College, Jai Narain Vyas University, Jodhpur-342 001.

# RESEARCH IN PROGRESS

## A list of research scholars registered for doctoral degrees in Indian Universities

### SOCIAL SCIENCES

#### Library & Information Science

1. Chaya Devi, V. **Academic and scientific information retrieval : The role of UGC; past, present and future perspectives.** Andhra. Dr R S R Varalakshmi, Lecturer, Department of Library and Information Science, Andhra University, Waltair.

2. Patnaik, K Rama. **Marketing of library and information services.** Andhra. Dr C Sasikala, Department of Library and Information Science, Andhra University, Waltair.

#### Psychology

1. Gupta, Pragti. **A study of suicide ideation and its psychological correlates in employed unmarried men and women at two age levels.** Panjab. Dr V V Upmanyu, Department of Psychology, Panjab University, Chandigarh.

#### Political Science

1. Bhardwaj, Pawan Kumar. **Panchayati Raj and processes of democratization in Himachal Pradesh: A case study of Jhandutha Block in Bilaspur District.** HP. Dr Y K Mathur, Department of Political Science, Himachal Pradesh University, Shimla.

2. Brij Lal. **Emerging trends in rural power structure: A study of a gram panchayat in Himachal Pradesh.** HP. Dr Gopal Singh, Department of Political Science, Himachal Pradesh University, Shimla.

3. Chug, Usha. **Politics of a dispersed minority community : A study of the Christians in Himachal Pradesh.** HP. Dr Rajinder Singh Chauhan, Department of Political Science, Himachal Pradesh University, Shimla.

4. Govind Ram. **Politics of social transformation in tribal areas : A comparative study of Gaddis and Kinners in Himachal Pradesh.** HP. Dr Rajinder Singh Chauhan, Department of Political Science, Himachal Pradesh University, Shimla.

5. Manju Kumari. **Indo-Nepal relations in the changing political environment.** HP. Dr Rajinder Singh Chauhan, Department of Political Science, Himachal Pradesh University, Shimla.

6. Nisha. **Politics of pressure group : A study of Apple Growers Association in Himachal Pradesh.** HP. Dr Rajinder Singh Chauhan, Department of Political Science, Himachal Pradesh University, Shimla.

7. Purn Dutt. **Centre's role and Cauvery Water Dispute : A study of tensions in Indian federalism.** HP. Dr V D Kaushik, Department of Political Science, Himachal Pradesh University, Shimla.

8. Sen, Lalit. **Trends in socio-economic profile of legislators of Himachal Pradesh, 1971-1993.** HP. Dr O C Sood, Department of Political Science, Himachal Pradesh University, Shimla.

9. Sharma, Avneesh. **Ethnic conflict in Sri Lanka and its impact on Indo-Sri Lanka relations since 1987.** HP. Dr Gopal Singh, Department of Political Science, Himachal Pradesh University, Shimla.

10. Vikas Singh. **Economic well being and ritual status in scheduled caste in HP : A study of Anil and Kumar Sain blocks.** HP. Dr Javeed Alam, Department of Political Science, Himachal Pradesh University, Shimla.

#### Economics

1. Anitha Kumary Amma, L. **Impact of fiscal incentives on industrial development.** Kerala. Dr M A Oommen, Prof, Department of Economics, Institute of Management in Government, Thiruvananthapuram.

2. Nampoothiri, M. Madhavan. **Changes in cropping pattern : An inter regional analysis.** Kerala. Dr M Kuttappan, Director, Department of Economics and Statistics, University of Kerala, Thiruvananthapuram.

3. Sebastian Louis, Burney. **An economic analysis of tourism industry.** Kerala. Dr K V Joseph, 'Kumpattu House', A-21 Aiswarya Nagar, Kesavadasapuram, Thiruvananthapuram.

4. Varghese, P.K. **Trade unionism and its impact on wages and productivity : A comparative analysis of Kerala and Tamil Nadu.** Kerala. Dr G Karunakaran Pillai, Prof, Department of Economics, University of Kerala, Kariavattom.

5. Varghese, T.A. **Role of Non-Governmental Organisations N.G.Os' in development and diffusion of rural technologies : A study with special reference to Kerala.** Kerala. Dr G Karunakaran Pillai, Prof, Department of Economics, University of Kerala, Kariavattom.

#### Law

1. Giri Sankar, S.S. **Impact of Constitutional and legal dynamics on regulation of economy.** Kerala. Dr N Narayanan Nair, Director, Centre for Advanced Legal Studies and Research, Thiruvananthapuram.

2. Laksami, P. **Legal dimensions of secularism.** Kerala. Prof R Sankadasan Thampi, Devakara, Santhi Nagar, Thiruvananthapuram.

3. Manoj Krishna, A. **Administration arbitrariness and Constitutional checks.** Kerala. Dr N Narayanan Nair, Director, Centre for Advanced Legal Studies and Research, Thiruvananthapuram.

4. Sivakumar, S. **Free Press: Journalists and law.** Kerala. Dr N Narayanan Nair, Director, Centre for Advanced Legal Studies and Research, Thiruvananthapuram.

#### Education

1. Dolma, Tsering. **Effectiveness of personalized system of**

instruction and project activity on the academic and affective outcomes of Tibetan students. HP. Dr Harbans Singh, Department of Education, Himachal Pradesh University, Shimla.

2. Jacob, Beenamma. A study of selected variables associated with achievement in Chemistry of vocational higher secondary students. Kerala. Dr P Viswanathan Nair, Reader, Department of Education, University of Kerala, Trivandrum.

3. Krishan Lal. Disparities in educational development of Himachal Pradesh with special reference to school education. HP. Dr Kulwinder Singh, Department of Education, Himachal Pradesh University, Shimla.

4. Nagarajaiah, R. A critical study of utilisation of community resources in teaching social sciences in secondary schools of Bangalore rural district. Kuvempu. Dr M M Pattanashetti, Lecturer, M.M. College of Education, Devangere.

5. Nareesh Kumar. Efficacy of secondary teachers pre-service training programme in relation to certain teacher effectiveness components : An evaluative study. HP. Dr Y K Sharma, Department of Education, Himachal Pradesh University, Shimla.

6. Roop Lal. Pre-primary education in Himachal Pradesh: An evaluative study. HP. Dr Yadavendra Kumar Sharma, Department of Education, Himachal Pradesh University, Shimla.

7. Sangita. A study of learning styles of gifted high school students across gender, school location, locus of control and self-esteem. HP. Dr B P Varma, Department of Education, Himachal Pradesh University, Shimla.

8. Savetapong, Suleeporn. Vocationalisation of education in Thailand : An evaluative study. HP. Dr Lokesh Koul, Department of Education, Himachal Pradesh University, Shimla.

9. Sharma, Om Parkash. A study of primary education curriculum in relation to attainment of objectives. HP. Dr Satish C Bhadwal, Department of Education, Himachal Pradesh University, Shimla.

10. Sood, Asha. Socio-psychological correlates of academic achievement of students belonging to other backward communities. HP. Dr Remesh Chand, Department of Education, Himachal Pradesh University, Shimla.

11. Suman, Rup Singh. Impact of continuing education on rural development in Himachal Pradesh : A critical study. HP. Dr Kulwinder Singh, Department of Education, Himachal Pradesh University, Shimla.

12. Tiku, Asha. A study of learning styles of rural school going children in relation to socio-economic status, self-concept and achievement-motivation. HP. Dr B P Varma, Department of Education, Himachal Pradesh University, Shimla.

13. Yaswant Singh. Growth and development of primary education in Himachal Pradesh : An evaluative study. HP. Dr Lokesh Koul, Department of Education, Himachal Pradesh University, Shimla.

## Commerce

1. Pathak, Abhay Kumar. Economics of sericulture in Ujjain division. Vikram. Dr G P Sharma, Prof, Department of Commerce, Govt Madhav College, Ujjain.

## HUMANITIES

### Philosophy

1. Sivameena, K.S. The philosophy of Ramana Maharshi : A study. Kerala. Dr D Nesy, Reader, Department of Philosophy, University of Kerala, Kariavattom.

### Fine Arts

#### Music

1. Kuldip Kumar. Kafi gayan vidha ka sangeetik evam sahityik adhyayan. Panjab. Dr Simmi R Singh, Lecturer, Department of Music, M C M D A V College for Women, Chandigarh.

2. Saroj Bala. Vaggyakar Bhakti Sangeetagyon ka sangeet ko yogdan. Panjab. Dr Simmi R Singh, Lecturer, Department of Music, M C M D A V College for Women, Chandigarh.

### Language & Literature

#### Sanskrit

1. Mamoth, Manjula. Sanskrit sahitya mein mrityu chintan: Ek anusheelan. Vikram. Dr Kedarnath Shukla, Lecturer, Department of Sanskrit, Vikram University, Ujjain.

#### Hindi

1. Savita Rani. Laxmi Narayan Lal ke upanyason mein adhunikta bodh. Panjab. Dr Yash Gulati, Department of Hindi, Panjab University, Chandigarh.

#### Malayalam

1. Malayil, Bichu X. Pathrabhasha : Valarchayum parinamavum. Kerala. Dr K Prasobhan, Prof, Institute of Correspondence Courses, University of Kerala, Kariavattom.

2. Rema Devi, A. Humanism in contemporary Malayalam poetry : A study based on G Sankara Kurup, Vailoppilli and Edasseri. Kerala. Dr N Mukundan, Reader, Department of Malayalam, University of Kerala, Kariavattom.

3. Sivakumar, R.P. Evolution of narrative style in Malayalam short stories. Kerala. Dr P Venugopalan, Reader, Institute of Correspondence Courses, University of Kerala, Kariavattom.

#### Tamil

1. Velayuthan, S. Folklore of Pallyan tribes in Western Ghats. Kerala. Dr P Doctor Nazeemdeen, Reader, Department of Tamil, University of Kerala, Kariavattom.

### History

1. Hundal, Simran. Small scale industries in the Panjab, 1901-1966 with reference to its socio-economic dimensions. Panjab. Dr J S Dhanki, Department of History, Panjab University, Chandigarh.

2. Jaypure, Bharat. Pashchim Nimar Jile ke bhavan nirman udyogon ka ek adhyayan : Utpadan evam vipanan ka vlahesh sandarbh mein. Vikram. Dr Satish Chandra Jain, Asstt Prof, Department of Commerce, Government College, Barwani (MP).

# THESES OF THE MONTH

## A list of doctoral theses accepted by Indian Universities

### SOCIAL SCIENCES

#### Library & Information Science

1. Chandran, Dayapulay. *Planning function in the management of university libraries in Andhra Pradesh*. Venkateswara. Prof N Guruswamy Naidu, Department of Library and Information Science, Sri Venkateswara University College, Tirupati.

2. Kumbar, Malianath Revensiddappa. *A study of users attitude towards the resources and services of university libraries in Karnataka*. Karnatak. Dr S L Sangam, Reader, Department of Library and Information Science, Karnatak University, Dharwad.

#### Psychology

1. Jain, Sindhu Rani. *Socio psychological study of images of successful and unsuccessful political leaders in India after ninth general election*. H S Gour. Dr (Mrs) Vijaya Shrivastava, Department of Psychology, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

2. Jana, Bratindi. *The effect of organizational climate, stress, coping mechanisms on teacher effectiveness: A study of male and female teachers*. Delhi.

3. Janardanan, A K. *A study of the levels of stress and its management in army personnel*. H S Gour. Dr Jai Prakash, Prof (Retd), R 106, Anupam Apartments, 4, C B D East Arjun Nagar, Delhi.

4. Kharb, Joginder Singh. *Organisation and psychological factors as determinants of academic achievement*. Delhi.

5. Malimath, Manjula V. *Dynamics of power in organisational effectiveness*. Bangalore. Dr G Mohan Kumar, Department of Psychology, Bangalore University, Bangalore.

6. Mehrotra, Sushma. *Effect of imagery and personality traits among pre-adolescent children*. SNT. Dr B L Sharma, Head, Postgraduate Department of Psychology, SNT Women's University, Bombay.

7. Nagarajaiah. *Nursing intervention in neurosis*. Bangalore. Dr A Parthasarathy, Department of Psychiatric Social Work, National Institute of Mental Health and Neuro Sciences, Bangalore and Dr Mohan K Issac, Addl Prof, Department of Psychiatry, National Institute of Mental Health and Neuro Sciences, Bangalore.

8. Patwardhan, Vanita V. *A comparative study of thinking processes of rural and urban women with special emphasis*

on creative thinking. SNT. Dr D Y Purankar, Krishnamayee Apartments, Survey No.127, Opposite Mahaveer Park, ITI Road, Anandh, Pune.

9. Solanki, Suchita. *The study of behavioural problems in mentally retarded children in relation to family environment*. SNT. Dr Kusum Damle, Nanda Deep, 209, Dr Ambedkar Road, Matunga, Bombay.

10. Talwar, Vandana. *Psychological assessment of altered states of consciousness: A comparative study*. Delhi.

11. Thankachan, M V. *Behavioural intervention in duodenal ulcer*. Bangalore. Dr H Mishra, Addl Prof, Department of Clinical Psychology, National Institute of Mental Health and Neuro Sciences, Bangalore.

#### Sociology

1. Pandey, Awadh Kishore. *Ethnicity and class formation among the tribes of Bihar: A comparative study of selected villages in Khunti sub-division of Ranchi District*. JNU. Prof K L Sharma, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

2. Silawat, Sudha S. *Shahrikaran ka grameen jeewan per prabhav: Gram Palda, Jila Indore ke sandarbh mein ek samajshastriya adhyayan*. Devi Ahilya. Dr Ramdas Maurya, Dr Baba Saheb Ambedkar National Social Institute, Mahoo.

#### Social Anthropology

1. Singh, Okram Kumar. *Stone age cultures of Manipur*. Manipur. D L Rajendra Singh, Addl Director of Education, Government of Manipur, Imphal.

#### Social Work

1. Bagali, Muttappa Mallikarjun. *Industrial accidents*. Karnatak. Dr N A Ganihar, Reader, Department of Studies in Social Work, Karnatak University, Dharwad.

#### Political Science

1. Adlakha, Vijay. *Role of regional political parties in national integration*. Kurukshetra.

2. Babu, Mukathoti John Padmakar. *The political philosophy of Jawaharlal Nehru: A study of his democratic, socialist and secular ideas*. Andhra.

3. Chandra, Sunil. *Conflict management in the Third World with special reference to India's role in Sri Lanka*. JNU. Prof S C Gangal, Centre for International Politics, Organisation and Disarmament, Jawaharlal Nehru University, New Delhi.

4. Chouhan, Pushpa. **Bharat mein sansadiya paddhatti: Siddhant evam vyavhar, 1947 se 1984.** Devi Ahilya. Dr P C Shrivastav, Department of Political Science, Govt Postgraduate College, Mahoo.

5. Das, Anita. **United States policy towards Indonesia: Beyond the Vietnam war, 1975-1988.** JNU. Prof B K Shrivastava, Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

6. Durrani, Shafiq Ur Rahman. **Oil as an instrument of Arab foreign policy.** JNU. Dr Pushpesh Pant, Centre for Studies in Diplomacy, International Law and Economics, Jawaharlal Nehru University, New Delhi.

7. Effendi, Cecep. **Indonesia's policy on regional security, 1976-87.** JNU. Dr Bhagwan Dass Arora, Centre for South, Central, South-East Asian and South-West Pacific Studies, Jawaharlal Nehru University, New Delhi.

8. Jha, Indra Mohan. **Diplomacy for regional cooperation: A comparative study of the Association of South East Asian Nations, ASEAN, the Gulf Cooperation Council, GCC and the South Asian Association for Regional Cooperation, SAARC.** JNU. Dr Pushpesh Pant, Centre for Studies in Diplomacy, International Law and Economics, Jawaharlal Nehru University, New Delhi.

9. Joseph, T M. **Politics of recruitment in public sector undertakings: A study of the Nativist Movement in Bangalore.** Bangalore. Dr S N Sangita, Assoc Prof, Development Administration Unit, I S E C, Bangalore.

10. Patnaik, Sanghamitra. **From Marcos to Aquino: US role in the democratic revolution of the Philippines.** JNU. Prof H K Shrivastava, Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

11. Prabhavati. **Bihaar vyavasthapika kee karyavahi mein mahila vidhayikayon kee bhagidari, 1952 se 1959 tak.** Magadh.

12. Sarabjit Kaur. **Economic inequalities and political conflict: A study with reference to Nigeria and Pakistan.** JNU. Prof K P Misra, Centre for International Politics, Organisation and Disarmament, Jawaharlal Nehru University, New Delhi.

13. Singh, Satyendra Kumar. **Changes in the Erstwhile Soviet-Union and its impact on the world.** Delhi.

14. Surinder Kumar. **Food policy of India and China: A political analysis.** Delhi.

15. Thapar, Shashi Kanta. **From Punjabi Suba to radical autonomism and secessionism, 1966-84.** Delhi.

16. Umakar, Vasant Motiramji. **Adhunikikaran, rajkiya vikas ani samajik rajkiya parivartan, prakriyet grameen netritvacha karyabhaag Narkhand Taluka kahetrateel gram**

**pranchayat starvateel netritvacha: Ek abhyas.** Nagpur. Dr CV Diwan, Department of Political Science, C P and Berar College, Nagpur.

17. Verma, Rekha. **Bharat mein nagarikon ko pradatt Maulik Adhikar evam uski vyavaharikata ka mulyankan.** Devi Ahilya. Dr Rashmi Shrivastava, Department of Political Science, Vikram University, Ujjain.

#### **Economics**

1. David, Neeta. **The economics of urban housing: A case study of Ujjain City of Madhya Pradesh.** Vikram. Dr (Mrs) S Moorthy, Prof and Head, Department of Economics, Vikram University, Ujjain.

2. Deole, Suchita. **Madhya Pradesh mein lok udyogon kee karya pranali tatha mulya niti.** Devi Ahilya. Dr R P Gupta, 39, Anand Nagar, Indore.

3. Gupta, Saroj. **Changing trends of India's foreign trade with European countries from, 1984-1992.** Devi Ahilya. Dr D R Deole, 36, Martand Chowk, Indore.

4. Jaya, C. **Financial intermediation in agriculture with reference to banking sector in Coimbatore District.** Avinashilingam. Dr (Smt) G Ramathilagam.

5. Kem, Maya D. **Changes in the structure of India's exports and imports, 1970-71 to 1990-91.** Avinashilingam. Dr K Chandrasekhar.

6. Kusuma Kumari, Bhamidipati. **Analysis of India's foreign trade: A study with special reference to the EEC and SAARC countries.** Andhra.

7. Mohana Kumar, P S. **Analysis of resource use efficiency of the spinning mills in Kerala.** CUST. Dr N Chandrasekharan Pillai, Prof, School of Management Studies, Cochin University of Science and Technology, Kochi.

8. Pandey, Sanjay. **Dakshin Pashchim Madhya Pradesh ke adivasayon ka samajik arthik shoshan.** Devi Ahilya. Dr V D Nagar, 'Nath Kirpa', Near Nath Mandir, South Tukoganj, Indore.

9. Piraburam, Borayan. **Cooperative sector in India: A study on trends in market shares, 1961-62 to 1983-84.** Andhra.

10. Singh, Irom Tombi. **A stochastic study of some models and economic growth.** Kurukshetra.

11. Srinivasa Rao, Kesana. **Rural non-farm employment and residual sector hypothesis: A study of macro and micro level data.** Andhra.

12. Subrahmanyam, Chunchu. **Indian Tobacco Board and FCV Tobacco, 1975-1992: A study of regulation of production, promotion of exports and remunerative prices to growers.** Andhra.

13. Tara Kumari, Peethala. **Women in urban informal sec-**

tor: A case study of Visakhapatnam City. Andhra.

14. Thimma Reddy, Madduri. **Marxian theory of profits: Some issues.** Hyderabad. Prof M Atchi Reddy.

15. Vepa, Swarna Sadasivam. **Pulses in India.** Delhi.

#### Law

1. Ajeet Lal. **A socio-legal study of Medical Termination of Pregnancy Act in the State of Jammu and Kashmir.** Jammu. Prof R D S Sehgal.

2. Sharma, Subhash. **Lokadalaton ke madhyam se Bhartiya nyayalayan ke nyaya pranali ke sameekaha, safalta aur asafalta.** Vikram. Dr G C Kasliwal, 24 Sarvodaya Nagar, Indore.

#### Education

1. Kadalaskar, Sanyogita S. **Madhyamik shalaya vidyarthi sadi vaigyanik abhivritti shalakechi nirminiya tiche pramanikaran.** SNTD. Dr H N Parasnis, Reader, SNTD College of Education for Women, Pune.

2. Khare, Suniti. **A comparative study of selected cognitive abilities of children studying in formal and non-formal centres.** Barkatullah. Dr (Mrs) A Grewal, Regional College of Education, Bhopal

3. Kumardhas, Vijaya. **An exploratory investigation of the relationship between the cognitive and effective characteristics of nursing teachers and their clinical supervision of student nurses.** SNTD. Dr A G Bhalwankar, Principal, SNTD College of Education for Women, Pune.

4. Mahapatra, Bhuban Chandra. **Development of software package for teaching Chemistry to class IX students of M P State.** Devi Ahilya. Dr (Mrs) Anuradha Joshi, Department of Education, Devi Ahilya Vishwavidyalaya, Indore.

5. Narayana Rao, Guntuboyana. **Performance of students of +2 level as a Mathematics test based on X class syllabus.** Andhra.

6. Neekhara, Rajendra Nath. **A study of diagnosis of errors in Chemistry and validation of remedial teaching on some topics.** Devi Ahilya. Dr P C Katiyar, 59 Krishi Vihar Colony, Near Tilak Nagar, Indore.

7. Sahni, Geeta. **Teaching of English at school stage in India: A functional approach.** Delhi.

8. Shahapur, Nagappa. **An investigation into the causes of underachievement in secondary school Mathematics.** Karnatak. Dr GM Patted, Prof (Retd), Postgraduate Department of Education, Karnatak University, Dharwad.

9. Sharma, Deepika. **Developing instructional material for facilitating creativity among elementary school children.** Devi Ahilya. Dr D N Sansanwal, Department of Education, Devi Ahilya Vishwavidyalaya, Indore.

10. Srikantaswamy, S. **An impact of a programme of critical thinking skills on the achievement of secondary school teacher trainees of Bangalore City.** Bangalore. Dr T K Jayalakshmi, Director, R V Educational Consortium, RVTC Building, Jayanagar, Bangalore.

11. Vagrecha, Vimla. **A study of creative behaviour in human interactions.** H S Gour. Dr H S Bais, L-21, Padmakar Nagar, Makronia, Sagar.

#### Commerce

1. Basheer, T P. **The impact of Integrated Tribal Development Project, ITDP on the economic development of tribes with special reference to Attapady Region.** Calicut. Dr K C Vijayakumar, Department of Commerce, University of Calicut, Calicut.

2. Inderjit Singh. **Labour welfare activities and industrial relations in cotton textile industry in Panjab.** Kurukshetra.

3. Kagte, Kishan Narayanrao. **Development perspective of Marathwada: A conceptual micro study.** Marathwada. Dr S K Mishra, S B College of Arts and Commerce, Aurangabad.

4. Mohammed Abdul Mahid. **Labour welfare and humanitarian trends in industrial adjudication.** Osmania. Prof E G Parameswaran, Department of Business Management, Osmania University, Hyderabad.

5. Nandakumar, M. **A comparative study of the public and private road passenger transport undertakings in Goa.** Calicut. Dr K C Vijayakumar, Department of Commerce, University of Calicut, Calicut.

6. Nema, Naresh Chandra. **Madhya Pradesh cement udyog mein shramikon ke karyakari dashayon ka adhyayan.** H S Gour. Dr K K Jain, Asstt Prof, Department of Commerce, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

7. Radha Krishnan, R. **An evaluation of entrepreneurship development programmes in Tamil Nadu.** Kakatiya. Dr Ravi Prakash Singaravelu, Reader, Department of Commerce, Arts and Science College, Kakatiya University, Warangal.

8. Ranawat, Chander Singh. **Rajgarh Jile mein ekikrit gramin vikas yojana ka kriyanayan evam prabhav.** Barkatullah. Dr V P Singh, Principal, Sadhuwaswami College, Bairagarh, Bhopal.

9. Silawat, Suresh Kumar. **Madhya Pradesh ke pichhre kahetron ke arthik vikas mein Madhya Pradesh Vitt Nigam ka yogdan: Dakshin Pashchim Madhya Pradesh ke visheesh sandarbh mein.** Devi Ahilya. Dr B S Bhandari, 201, Varshadeep, 10/1/2 South Tukoganj, Indore.

10. Vaishnav, Manohar Das. **M P mein janankiya dabav tatha avas samasya ke prabhavon ka pichhle do dashkon ke**

**antragat adhyayan.** Barkatullah. Dr Sharad Kumar, Regional College of Education, Bhopal.

### Home Science

1. Deoskar, Asha Vijay. **Standardization and premix development for selected traditional flour based sweets.** Nagpur. Dr (Mrs) P N Shastri, Department of Food and Technology, L I T N U, Nagpur.

2. Dhingra, Rajni. **Continuity and changes in child-rearing practices in three different caste groups: An intergenerational study.** Jammu. Dr I J S Jaswal.

3. Karanpuria, Indu. **Indore Sambhag mein ekikrit vikas sewa yojana mein pradatt bal kahetra evam gair ekikrit bal vikas sewa yojana kahetra mein bachchon ke swasthya evam poshan ahar star kee tatha matayon ke swasthya evam poshna ahar ka tulnatmak adhyayan.** Vikram. Dr (Mrs) Kamlesh Sharma, 38, Block C, 6th Floor, Navlakha Complex, Indore.

4. Khare, Savita. **Sagar Shahar mein Hindu, Muslim, Jain, samudaya kee 30 se 45 varsh kee mahilayon ke ahar ka swasthya ke drishtikon se tulnatmak adhyayan.** H S Gour. Dr V K Dixit, Head and Dr R K Upadhyayan, Department of Pharmacy, Dr Hari Singh Gour Vishwavidyalaya, Sagar.

5. Malini, B P. **A study on teeners, vocational interest and attitude towards pursuing family vocation in selected rural area.** Bangalore. Dr Indira Krishna, Addl Director (Retd), Collegiate Education, 46, Sri Sharada Savika Mandali Trust, Ranga Rao Road, Bangalore.

6. Patni, Manju. **Karyakari evam ghrelu mahilayon ke nirnaya kahamata ka adhyayan.** Devi Ahilya. Dr Shail Bansal, Department of Home Science, Govt Nutan Girls Postgraduate College, Indore.

7. Paul, Mercy Maragatham. **Possibilities of improving maternal nutritional status in an effort to reduce the incidence of Intrauterine growth retardation.** Avinashilingam. Dr (Smt) Vijayalakshmi Purushothuman.

8. Punetha, Suniti. **A comparative study of child care practices of selected tribal groups.** SNTD. Dr Ravikala Kamath, Head, Postgraduate Department of Human Development, Home Science, SNTD Women's University, Bombay.

9. Sondhi, Poonam. **Psychosocial perspectives of street children: Child porters without familial contact.** Delhi.

10. Tewari, Kirti. **Study of underlying values and their influence on decision making practices.** Nagpur. Dr (Mrs) Asha Nimkar, Department of Home Science, Nagpur University, Nagpur.

11. Vijayalakshmi, D. **Impact of transfer of agricultural technology on nutrition and health status of farm women and children**

**1-6 years.** Bangalore. Prof Nirmala Rao, Head, Department of Home Science, Smt V H D Central Institute of Home Science, Bangalore.

### Management

1. Bijay Kumar, K C. **The financing of corporate growth: A case study of Nepal.** Delhi.

2. Jain, Rajnish. **Marketing of professional services: A case study of advertising agencies' services.** Devi Ahilya. Dr R D Pathak, Department of Management, Devi Ahilya Vishwavidyalaya, Indore and Dr Upinder Dhar.

3. Mathew, K A. **A study of capital structures in major industrial concerns in Kerala.** CUST. Dr P R Wilson, Lecturer, School of Management Studies, Cochin University of Science and Technology, Kochi.

4. Mehta, Varsha. **Management information system of industries in Jammu: A comparative study of Hindustan Lever Ltd., Bhilwara Ltd., and Indian Sewing Machine Ltd., Singer.** Jammu. Dr N S Gupta and Dr Ashok Aima.

5. Rohmetra, Neelu. **Human resource development in commercial bank: A comparative study of Jammu and Kashmir Bank and State Bank of India.** Jammu. Dr K K Aro and Dr J R Dhotra.



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**Application should be addressed to : Secretary, The IndusInd Foundation, 193 Deen Dayal Upadhyaya Marg, New Delhi 110 002 to reach latest by 31/7/95. The decision of the Foundation will be final.**

# CLASSIFIED ADVERTISEMENTS

## NIRMALA INSTITUTE OF EDUCATION Altinho, Panaji, Goa

Applications with full bio-data are invited for the following posts so as to reach the Principal within 15 days from the date of publication of this advertisement for the year 1995-96.

Applications must be accompanied by certified copies of marksheet of all the examinations from SSC onwards. Those already employed, shall forward their applications through proper channel.

Category of Post : OPEN  
Full-time Librarian : 1 post

### Qualifications :

**Librarian :** Master's Degree in Library Science/Information Science/Documentation or an equivalent professional degree with at least 55% marks or its equivalent professional grade plus a consistently good academic record, as prescribed by Goa University.

OR

Master's degree in Arts/Science/Commerce or equivalent degree with at least 55% marks or its equivalent grade with Bachelor's degree in Library Science/Information Science/Documentation or equivalent grade plus a consistently a good academic record as prescribed by Goa University.

Candidates should have cleared the Eligibility Test for Librarian's post. In case candidates having passed Eligibility Test are not available or not found suitable, general category candidates would be appointed on temporary basis.

**Scale of Pay :** Rs. 2200-75-2800-100-4000 plus admissible allowances as per rules.

Terms and conditions of service are those laid down by the Goa University/Directorate of Education, Goa and other competent authorities.

## M.O.C. COLLEGES DEVALOKAM KOTTAYAM - 686 038

### WANTED

Wanted Lecturers in Economics and History for appointment in colleges under the Corporate Management of Malankara Orthodox Church Colleges:

Qualification & Age as prescribed by U.G.C. and Govt.

Apply within one month from the date of this notification. Application forms can be had from the undersigned on payment of Rs. 35/- (Rs. 37/- by post).

SECRETARY

## Diocesan Society of Education's ROSARY COLLEGE OF COMMERCE & ARTS NAVELIM, SALCETE, GOA - 403 707

Applications are invited for the following posts :

1) Lecturer in History - 1 Post (Part Time)

2) Lecturer in Computer Awareness - 1 Post (Full Time)

3) Lecturer in Konkani - 1 Post (Lecture Basis)

### Essential Qualifications :

1) Master's degree in the relevant subject with atleast 55% marks or its equivalent grade and good academic record.

2) The candidates must have the Master's degree as well as the Bachelor's degree in the same subject for which he is being appointed.

3) Candidates should have cleared the Eligibility Test for Lecturers conducted by UGC, CSIR or similar tests accredited by UGC. In case, candidates having passed the said eligibility test are not available, candidates fulfilling other conditions would be considered for appointment on purely temporary basis.

4) All other requirements prescribed by UGC and Goa University.

### 5) For Computer Awareness :

(a) First Class B.E./B.Tech in Computer Science or Electronics having consistently good academic record with two years experience of teaching/research/industry. In case candidates having passed GATE are not available or found suitable, candidates without GATE may be considered for temporary appointments.

OR

(b) M.E./M.Tech in Computer Science or Electronics with 55% marks and good academic record.

OR

(c) M.C.A. or M.Sc. in Computer Science or Electronics with 55% marks and good academic record.

OR

(d) M.Sc. Statistics or Mathematics with 55% marks and good academic record with exposure to Computer Science.

### Desirable Qualifications :

Ph.D. or M.Phil and a regular student for graduation and post-graduation.

### Scale of pay :

Rs. 2200-75-2800-100-4000 and other admissible allowances. Persons who are already employed shall send their applications through proper channel.

Certified copies of statement of marks at all public examinations should be enclosed.

The number of vacancies may change depending on the workload. The right not to fill up any of the above mentioned posts is reserved.

Applications alongwith attested xerox copies of all certificates should reach the undersigned within 15 days from the date of publication of the advertisement.

PRINCIPAL

**SHIVAJI UNIVERSITY  
KOLHAPUR**

**Advertisement No. 2 of 1995.**

Applications are invited for the following teaching posts in the University Post Graduate Departments of Computer Science, Library and Information Science, School of Applied Science and Barr. B.K. Library at Kolhapur.

**1) PROFESSOR (3 Posts) :** One each in

1. Computer Science
2. Library Science (Library & Information Science)
3. Environmental Science (Teaching and Research of high caliber in the Field of Environmental Sciences including related interdisciplinary subjects.)

**2) READER (1 Post) :** for Computer Science.

**3) LECTURER (1 Post) :** for Computer Science.

**4) LIBRARIAN (1 Post)**

**5) DY. LIBRARIAN (1 Post)**

**6) ASSTT. LIBRARIAN (2 Posts)** [One for Solapur Centre reserved for S.C. (1)]

**Instructions :**

1. One who is already employed must submit his/her application through proper channel.

2. Application received after last date and incomplete will not be entertained.

3. The University shall not be responsible for postal delay, if any.

4. Candidates who wish to be considered for more than one post must make separate application for each of the posts.

5. DETAILS OF PAY SCALES AND QUALIFICATIONS FOR THE POSTS MENTIONED IN THE ADVERTISEMENT WILL BE SUPPLIED SEPARATELY ALONGWITH THE PRESCRIBED APPLICATION FORMS AND THE SAME WILL BE AVAILABLE IN THE UNIVERSITY OFFICE FOR PERUSAL.

Prescribed application forms (a set of

the Ten copies) can be had from the University Office on payment of Rs. 100/- in cash and by post on sending a demand Draft of Rs. 105/- drawn in the name of Registrar, Shivaji University, Kolhapur payable at Kolhapur Branch. The application alongwith enclosures duly attached to each application should be sent to the Registrar, Shivaji University, Vidyanagar, Kolhapur - 416 004, so as to reach him on or before 18-8-1995.

Kolhapur  
Vidyanagar.

Date : 10/7/1995

Dr. B.P. Sabale  
REGISTRAR

**NORTH EASTERN REGIONAL  
INSTITUTE OF SCIENCE &  
TECHNOLOGY**

NIRJULI  
Arunachal Pradesh

M.H.R.D., GOVT. OF INDIA

**Corrigendum to Advertisement  
No. 3/95 (3rd Attempt)  
Special Drive for Recruitment of  
SC/ST Candidates**

In this office advertisement No. 3/95 (3rd attempt) the line "last date for issue of application form is 4.8.95" is hereby deleted.

P.G. Nair  
Deputy Registrar (Admin)

**Goa Vidyaprasarak Mandal's  
COLLEGE OF EDUCATION  
POST BOX NO. 10  
PONDA-GOA - 403 401**

Applications with full Bio-data are invited for the following posts so as to reach the Principal within 15 (fifteen) days from the date of publication of this advertisement for the year 1995-96.

Applications must be accompanied by certified copies of marksheets of all the Examinations from SSC onwards. Those already employed, shall forward their applications through proper channel.

**CATEGORY OF THE POST:- OPEN  
Full Time Lecturer**

- (a) With special method in Geography:- 1 post
- (b) With special method in Marathi:- 1 post

**CATEGORY OF POST:- RESERVED  
FOR SC/ST**

Full Time Lecturer

- (a) With special method in Hindi:- 1 post  
(Advertised for the first time)
- (b) With special method in Konkani :- 1 post  
(Advertised for the second time)

**Qualifications:-** Candidates should have Masters' Degree in the relevant subject (i.e. Education) with at least 55% marks or its equivalent grade and good academic record as prescribed by U.G.C.

Candidates applying for Lecturers' posts must be citizens of India and have passed the eligibility test for Lecturership conducted by the UGC, CSIR or similar test accredited by the UGC. However if such candidates are not available or found not suitable, general category candidates will be appointed on temporary basis and the appointment will not be confirmed till the candidate passes the National Eligibility Test within stipulated period.

**Scales of Pay:-** Rs. 2200-75-2800-100-4000 plus admissible allowances as per rules.

Terms and conditions of service are those laid down by the Goa University/ Directorate of Education, Government of Goa and other competent authorities.

In case candidates from reserved category are not available, general category candidates will be appointed as per Goa University Rules.

LOUIS VERNAL

Ponda, Goa

PRINCIPAL

Date:- 15th June 1995

## HNB GARHWAL UNIVERSITY, SRINAGAR (GARHWAL)

### ENTRANCE EXAMINATION NOTIFICATION FOR PROFESSIONAL COURSES 1995-96

Applications for the undernoted professional courses are invited on plain paper (duly typed with information mentioned below) by registered post latest by **Aug. 31, 1995** addressed to Prof. K.S. Nagi Incharge (Entrance Exam), Dean, Faculty of Commerce, HNB Garhwal University, Srinagar - 246 174, Garhwal, U.P., accom-

panying the attested copies of testimonials, passport size photographs, Bank draft for Rs. 200/- drawn in favour of The Registrar at SBI, Srinagar (Code 3181) and a self addressed 10 x 23 cm. sized envelope (with stamps of Re. 1/- affixed). The envelope accompanying application must be superscribed by "Entrance Exam course....."

- |     |  |   |
|-----|--|---|
| C1. | P.G. DIPLOMA IN BUSINESS ADMINISTRATION      | (Seats Srinagar-15 Tehri-10,) CD-One year.                        |
| C2. | P.G. DIPLOMA IN COMPANY ADMINISTRATION       | (Seats - 15), CD-One year   |
| C3. | P.G. DIPLOMA IN TOURISM AND HOTELIERING      | (Seats-15), CD-One year   |
| C4. | BACHELOR IN JOURNALISM                       | (Seats-Srinagar-20, Tehri-6, DAV College Dehradun-15) CD-One year |
| C5. | P.G. DIPLOMA IN COMPUTER SCIENCE APPLICATION | (Seats-20 for U.P. + 10 Seat for others States) CD-One year.      |
| C6. | MASTER OF TOURISM ADMINISTRATION             | (Seats-15) CD-Three years.  |
| C7. | MASTER OF JOURNALISM                         | (Seats-10) CD-One year  |

Minimum Qualification: C1 - B.Com. (50%) or B.A./B.Sc. (55%) C2, C3, C4 - Graduation. C5 - B.Sc. in Physical Science (45%) or Science graduate (45%) having offered Physics/Statistics/Economics and Mathematics at Intermediate level. C6 - Graduation (50%). C7 - B.J.

TEST VENUE - BIRLA CONSTT. COLLEGE, SRINAGAR (GARHWAL)

DATE OF ENTRANCE EXAM.:-

17/09/1995 AT. 3.00 PM

DURATION:- Two hours.

TEST: The combined entrance test shall consist of two papers namely :- (i) General knowledge and languages (100 Marks) and (ii) General awareness and aptitude test (100 Marks for C1, C2, C4, C7 and 50 marks for C3, C5 and C6) relating the subject.

MODE: Objective type. Qualifying marks 90/200.

Candidates who intend to opt courses C3, C5 or C6 will have to appear before a Committee for interview and group discussion on the next day (18.9.95) at 10.00 a.m. in the respective Departments at their own expenses. Candidates can apply for one and only one course. A candidate selected for one course will not be permitted to join the other. The typed application should furnish the following information:-

1 - Course Name, 2- Name of the Applicant (in block capitals), 3 - Father's Name, 4- Date of birth, 5- State, 6- Sex, 7- (a) Address for correspondence, (b) Permanent address, 8 - Academic qualifications (Name of exam passed, year, Board/Univ. Subjects, Division, Percentage) 9 - Whether belongs to SC/ST, 10- Details of Bank draft (No., Amount, Date, Bank's name), 11- Signature of applicant.

A pass port size photograph must be pasted at the top on the right hand of the application. The envelope containing the application should be superscribed by course code and course name at its right hand top of application. Students will have to give their options for the colleges in which they intend to take admission.

S.C. Sharma

REGISTRAR

### BANARAS HINDU UNIVERSITY OPPORTUNITIES FOR Ph.D/C'AKRAVARTI ENROLMENT — SEPTEMBER 1995 TERM

Applications are invited on the prescribed application form for enrolment in various areas of research in the Faculties of Arts, Social Sciences, Commerce, Sanskrit Vidya Dharm Vigyan, Law, Performing Arts, Visual Arts, Education, Science, Management Studies, Engg. & Technology, Ayurveda and Medicine.

Candidates, who have passed the qualifying examination or whose results are likely to be declared on or before 31-8-95 may apply for registration. Application form along with the Ordinances prescribing the eligibility conditions for registration can be obtained either personally from the Incharge, Publication Cell, Banaras Hindu University, Varanasi-221005 on cash payment of Rs. 10/- or through Post by sending request along with crossed Postal Order for Rs. 10/- in favour of Registrar, Banaras Hindu University, Varanasi-221005, along with a self-addressed stamped (worth Rs. 10/-) envelope of the size 22 x 15 cm.

— LAST DATE FOR POSTAL REQUEST — **Monday, 21st Aug., 1995**  
— LAST DATE FOR COUNTER SALE — **Thursday, 31st Aug., 1995**  
— LAST DATE FOR SUBMISSION OF COMPLETED FORMS — **Thursday, 31st Aug., 1995**

## MANIPUR UNIVERSITY

CANCHIPUR :

IMPHAL - 795003

Advertisement No. 2/95

Dated, the 14th July, 1995

No. MU/6/14/87-Admn.I: Applications on plain paper with complete postal address are invited for the post of Finance Officer of this University in the scale of pay of Rs. 4500-150-5700-200-7300/- p.m. plus admissible allowances under rules. The applications should reach the Registrar, Manipur University, Imphal-795003 on or before the **23rd September, 1995** along with a fee of Rs. 30/- in IPO or Bank Draft in favour of the Registrar of the Manipur University. The appointment shall be on tenure for a period not exceeding five years, which may be renewed for similar terms. Candidates must be of the age of 53 years or below, provided that the upper age limit may be relaxed in the case

of deserving candidates who are below 58 years of age. The University reserves the right to consider persons who have not applied for the post. Candidates should fulfil the following qualifications :-

- (i) At least Second Class Master's Degree in Economics, Commerce, Business Administration/Management, Statistics or Mathematics with 55% marks in Master's Degree, or Chartered Accountant/Cost Accountant. In the case of persons who have been in continuous service in the University in the grade of Deputy Finance Officer for a minimum period of 10 years, 55% marks may not be necessary;
- (ii) Not less than 15 years' experience (10 years' experience in the case of Chartered Accountant/Cost Accountant) in supervisory/administrative capacity of financial management, planning and administration in a University or

an organisation of comparable standard.

Th. Joychandra Singh

REGISTRAR

### P.S.M. DEGREE COLLEGE, KANNAUJ, FARRUKHABAD

Wanted Lecturers in History and Geography (Leave Vacancy-Under F.I.P.) as per prescribed qualifications and pay scale. Candidates may apply on prescribed application form which can be obtained from the college on a cash payment of Rs. 50.00 or Rs. 60.00 by post. The application forms must reach the undersigned **within 21 days** of this advertisement.

DR. R.B. CHATURVEDI

PRINCIPAL

## NUCLEAR SCIENCE CENTRE

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(An Autonomous UGC Institution)

ADVT. 3/95

Applications are invited for following:

**SCIENTIST TRAINEE:** (3 Pos. one general, others reserved for SC & ST): M.Sc in Phys, persons with M.Sc before 1993 needn't apply. Fixed stipend of Rs. 2500 during training period with free hostel type accommodation of one year. If successful after training, may be placed in Detector/Cryogenics Lab. (grade Rs. 2200-4000).

**SCIENTIST (ATOMIC PHYS.).** Grade Rs. 3000-4500: Ph.D in Experimental Atomic Phys, min. 2 yrs experience in accelerator based research. Meritorious candidates with relevant experience may be considered for higher grade.

**ENGINEER (CRYOGENICS):** Grade Rs. 3000-4500: B.E. (Mech) or M.Sc (Phys) Min. 4 yrs experience in cryogenics. Hands on experience on He-refrigeration system is required. Familiarity with cryostats/Gas Handling System and computer aided designing will be considered as added qualification.

**ENGINEER (EXPERIMENTAL FACILITY DEVELOPMENT).** Scale Rs. 3000-4500: B.Tech (Instrumentation/Electronics) after B.Sc. (Physics) or M.Sc. (Tech/Applied Phy.) or M.Sc. (Physics with Electronics); Min 4 years experience in development of instrumentation and computer interfacing. Experienced in both hardware and software is preferred.

Send curriculum vitae with complete details with photograph and attested marksheets from High School onwards and names of three referees. Information should reach A.D. (Admn), Nuclear Science Centre, Aruna Asaf Ali Marg, Post Box 10502, New Delhi - 110067 **within 30 days** from the day of this advertisement.

# INSTITUTE OF BUSINESS MANAGEMENT

NATIONAL COUNCIL OF EDUCATION, BENGAL  
CALCUTTA - 700 032.

## ADMISSION NOTICE

### MASTER OF BUSINESS ADMINISTRATION (M.B.A.) DEGREE COURSE OF JADAVPUR UNIVERSITY

Applications are invited for admission to the 12th batch (Session 1996-98) of the Three-Year (Evening) MBA Degree Course of Jadavpur University conducted by the Institute of Business Management, N.C.E., Bengal. Classes will commence from January 1996

**Eligibility** Minimum academic qualification

An Honours Degree in any discipline of a recognised University

OR

A Master or Bachelor (General/Pass) Degree in any discipline of a recognised University with 50% marks in the aggregate.

**Note :** No other Professional Qualification except Degree of a recognised University will fulfil the minimum eligibility requirement.

Admission to the Course will be made on the basis of Written test, Interview and previous academic records

**Normal Intake - 60** (including a few deputed candidates)

#### For General Candidates:

Application Form with Prospectus can be obtained from the office of The Director, Institute of Business Management, P.O. Jadavpur University, Calcutta - 700 032 between 4.00 P.M. and 7.00 P.M. on all working days from Monday 3rd July, 1995 to Wednesday 9th August, 1995 on payment of Rs. 125/- in cash/Draft

#### For Deputed Candidates:

Organisations sponsoring candidates must apply in writing to the Director for issue of Prescribed Application Forms on payment of Rs. 125/- each

Forms can also be obtained by post on payment of Rs. 125/- in Crossed Bank Draft payable to "N.C.E., Bengal, A/c I.B.M." at Calcutta and the request should be accompanied by postage stamp of Rs. 8/- only

**Last date for receipt of completed application form with prescribed registration fee : Saturday 12th August, 1995.**

**Written Test will be held in Calcutta on Sunday, the 20th August, 1995.**

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